

ANALYST

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IMAGING

1

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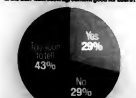
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In the Sun-Microsoft agreement good for users?



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Four Keys to Virtual-Team Success

IT MANAGEMENT: Learn how to work with the various personality types on your geographically dispersed team, advises trainer Claire Sookman. **QuickLink 40886**

Stop Playing "Patch-up"

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Is There a Place for 802.11a?

MOBILE/WIRELESS: Using more than one wireless standard can add flexibility, says columnist Allen Hutchinson. **QuickLink 40879**

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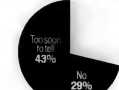
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AT DEADLINE

Former CA Execs Admit to Fraud

Three former finance executives at Computer Associates International Inc. pleaded guilty to securities fraud and conspiracy charges related to improper booking of sales during the company's 2000 fiscal year. Among those entering pleas was former Chief Financial Officer Ira Zar. A fourth former CA official pleaded guilty in January; all four were forced to resign in October.

In a statement, the U.S. attorney for the Eastern District of New York said the guilty pleas "demonstrate the corrupt culture in Computer Associates' management." CA previously acknowledged that revenue was improperly recognized through the use of a "35-day month" approach, in which sales were booked after a quarter ended.

Last week, CA said the ongoing federal probe could result in charges against other executives. In addition, the company noted that its audit committee is close to finishing an internal investigation and an assessment of whether CA will have to restate any financial results.

Sun's Cuts Prompt Processor Changes

Sun Microsystems Inc. said it's dropping plans to develop an UltraSparc V high-end processor and a chip called Gemini for low- and servers. Instead, Sun will focus on developing a pair of server chips code-named Rock and Itanium. The changes are part of the downsizing that Sun announced two weeks ago.

Vendors Team on Cobol Migration

Microsoft Corp. and Micro Focus International Ltd. in Rochdale, Md., said they're teaming up to support migration of Cobol mainframe applications to Windows servers. The deal is built around the use of rehosting software developed by Micro Focus.

Foundry Launches High-Layer Switches to Help Block Attacks

Products focus on prevention of DoS attacks

BY MATT HAMBLER

FOUNDRY Networks Inc. today will announce modular and stackable switches for Layer 4-7 tasks, with a particular focus on corporate security requirements.

Sun Jose-based Foundry will launch two modular switches dubbed ServerIron 450 and ServerIron 850 and a stackable device called ServerIron GT.

The products are designed to deter denial-of-service (DoS) attacks, company officials said. The modular switches deliver up to 320,000 Layer 4 connections per second, a speed that improves their ability to identify whether a transmission is permitted. That translates to protection against more than 4 million DoS attack packets per second, the officials said.

Interland Inc., a Web hosting provider in Atlanta, is con-

sidering purchasing two ServerIron 450s for one of its data centers to fight spam, said Greg Conroy, a network manager at Interland. "The key is being able to filter out spam that abuses our services," he said.

Interland has 200,000 Web hosting customers, with 6,000 Web servers in each of its data centers in Atlanta and Miami and about half as many in a data center in Fremont, Calif.

The company has used previous versions of ServerIron products but wants the new capabilities in the ServerIron 450 for policy-based routing to determine whether e-mail is allowed, Conroy said.

He added that Interland typically doesn't consider products from other network equipment providers because his staff is trained on Foundry's products. "There are no others we'd feel com-

FOUNDRY'S PRODUCTS



MODULAR SWITCHES

ServerIron 450/850

General availability: This month

• 450: \$34,900

• 850: \$56,900

STACKABLE SWITCHES

ServerIron 6T

General availability: Summer

• Four-port Gigabit: \$14,900

• Four-port Gigabit with Secure Sockets Layer: \$21,900

• 12-port Gigabit with SSL: \$27,900

fortable deploying," he said.

The market for Layer 4-7 products is dominated by Cisco Systems Inc. and includes vendors such as FS Networks Inc. in Seattle and Radware Inc. in Mahwah, N.J., said Zeus Kerravala, an analyst at The Yankee Group in Boston.

Market revenue reached \$400 million last year and could climb to \$1 billion in 2007, he said, attributing the expected growth to increased interest in building more intelligence into networks.

In addition to security, Layer 4-7 switches handle tasks such as load balancing, traffic shaping and route control.

Also today, Foundry is announcing a new version of its Content Analysis Engine that supports a range of application content standards, including SOAP, XML, Financial Information Exchange, the Wireless Application Protocol and the Session Initiation Protocol. It can be customized to inspect, filter, switch and prioritize application traffic, Foundry said. ☐ 46082

Group Urges Feds to Leverage Buying Power to Boost Security

BY JACQUELINE BULFAMANT

A working group of representatives from IT trade and security organizations is calling for federal agencies to use their massive buying power to force IT vendors to build more secure products.

The Corporate Information Security Working Group (CISWG), established in November by Rep. Adam Putnam (R-Fla.) (QuickLink 42668), also recommends that insurers base the cost of cyber-risk insurance policies on a company's security posture to encourage adoption of best practices. Putnam's office announced these and other rec-

ommendations last week.

The CISWG's mission is to help the federal government plan for improving cybersecurity in corporate America. Its members include representatives from several high-tech trade associations and security groups, including the Information Technology Association of America, the Business Software Alliance and the Internet Security Alliance.

Enforcing Standards

One key recommendation calls for enforcement of the provisions of the Federal Information Security Management Act, said Alan Pallier, a

CISWG member and director of the SANS Institute, a security organization in Bethesda, Md. FISMA requires federal agencies to establish and enforce minimum security configuration standards for systems they buy. And that will benefit corporations as well, Pallier noted.

"The federal government has \$56 billion worth of buying power. If it sets minimum requirements for its own machines, it will cost the vendors nothing to deliver similarly safe machines" to the private sector, Pallier said.

Another recommendation is for the establishment of standard guidelines and generally accepted measurement tools that users can adopt when implementing security proce-

dures, said Michael Rasmussen, an analyst at Cambridge, Mass.-based Forrester Research Inc. and a CISWG member. "A lot of the existing guidance is all over the map," Rasmussen said. ☐ 46081

ADDED ADVICE



IT Execs Ambivalent About Subscription Pricing

Sun plans to adopt model for Solaris; lowering costs unlikely

BY PATRICK THIBODEAU
LAS VEGAS

Software subscription licensing plans, like the one Sun Microsystems Inc. intends to offer for its Solaris operating system, may be appealing to some users. But companies aren't expecting the model to lower their costs.

"I can see the benefit right off the bat," said Paul Romano, senior manager of computer operations at Commonwealth Automobile Reinsurers in Boston. "You know upfront what your cost will be and how it will affect your bottom line."

But Romano said the subscription model doesn't mean there's a price break. "Nothing lowers your cost. [Vendors] say they will lower your costs, and they will kill you [with higher prices]," said Romano.

John Loiacono, who recently

replaced Jonathan Schwartz as head of Sun's software division, said last week that a subscription plan is in the works for the Solaris operating system. Solaris 10, a major new release of Sun's version of Unix, is due by year's end.

Loiacono isn't promising price reductions with the subscription model, but he said he believes users want the predictability and simplification that a subscription can yield. Sun is looking at a range of pricing options that also include hardware. "We have a lot of ideas on the table," he said.

Loiacono said that one model is similar to a cell phone licensing agreement in which users "get the hardware and software effectively for free because they charge you

for the service."

Sun has introduced several innovative pricing models since last fall. For example, in September it began offering its

Java Enterprise System, an integrated software stack that includes Sun's directory, application and portal servers, at an annual fee of \$100 multiplied by the number of employees in the user company (QuickLink 41523).

Several users who met here last

week at the AFCCM data center conference expressed interest in the subscription plan but also said that licensing—regardless of the model—is becoming a major headache.

The city of Norfolk, Va., has begun searching for someone to manage its software licensing, partly out of a need to en-

sure that it isn't caught running unlicensed software during a vendor's audit, said Donald Adams, manager of computer operations and voice communications for the city. "It's hard to control and keep track of licenses," said Adams, noting that one prob-

lem the city faces is departments that install software on systems but don't tell the IT department about it. "It's a mind-boggling mess," he said.

Whether the subscription model is of any help would depend entirely on how much it costs, Adams said. **Q 46170**

Nortel Offers Apps to Improve Reliability of Voice IP Systems

BY MATT HAMBLER

Nortel Networks Ltd. last week announced two networking software products designed to increase the reliability of IP voice systems in branch-office operations.

The Survivable Remote Gateway (SRG) and Business Communication Manager (BCM) 3.6 augment Nortel's Succession 1000 IP private branch exchange voice switch.

The combination gives branch-office users full access to the same voice features and applications that exist at the main corporate site, said Aziz Khadhai, general manager of local premise solutions at Nortel.

Chimes International, a nonprofit organization in Baltimore that operates group homes for people with disabilities in five states, plans to deploy the SRG in one of its Baltimore sites this week. The deployment follows a successful five-week test, said Maria Lampner, CEO and chief financial officer at Chimes, which uses voice-over-IP technology for its telephone system.

Lampner said the SRG's main function will be to ensure a live telephone connection for group-home residents should there be an Internet failure. The SRG software automatically converts a voice call from IP to a circuit-switched call over the public switched telephone network (PSTN) if there's a problem

with Internet connectivity, he said. "We provide a lot of services where we don't afford to be without a phone," Lampner said. "In the event of a failure of the Internet through a DNS attack, the ability [to avoid stranding] people without phone service is very attractive."

If this week's deployment is successful, Lampner said he plans to use the SRG at a second group home.

Chimes' move to the Succession system last year was its first step toward IP telephony. Lampner said that over the years, he has tried various products from Cisco Systems Inc. and 3Com Inc. but found Nortel gear to be generally more reliable.

It's possible to route calls from IP to circuit-switched technology with equipment from other vendors, but the SRG appears to be unique in that it does so automatically, said Zew Kervanala, an analyst at The Yankee Group in Boston. Cisco has a product that reroutes IP phone calls in the event of an outage, but instead of rerouting to the PSTN, the software locates another IP connection.

The SRG will sell for \$1,800. There's no charge for the upgrade to BCM 3.6, which Nortel said provides a range of call center and voice features to the Succession system. Both products will ship next month. **Q 46094**

IT Vets Reminisce on IBM 360's 40th Anniversary

LAS VEGAS

As IBM celebrated the 40th anniversary of its System/360 mainframe in Silicon Valley last week, gray hair gave away the IBM 360 veterans attending the AFCCM conference, which took place here at about the same time as IBM's celebration.

Mark Watts, a data center supervisor at an insurance company in Phoenix that he joined not long ago, is a 37-year IT veteran who remembers the 360 as a major technology advance.

Previously, IT workers had to change wiring configurations to get certain processes to run. Watts said, "It was wonderful because you didn't have to wire the boards anymore," he said.

Dan Galloway, another 360 veteran, called the system "revolutionary," but time hasn't softened his criticism of its expense. He said a process that used to cost him \$1 to run on another IBM



system that wasn't as full-featured cost him \$5 on the 360. Galloway is now business development manager at Triton Technology Systems Inc. in Tulsa, Okla.

Marc Veen, operations support at Allcor Inc. in Ada, Mich., started working in IT with the advent of the 360's successor, the IBM System/370.

And he will witness another bit of history, at least at his company. Allcor is gradually ending its use of mainframes, moving to

more open systems.

"The mainframe is going away," Veen said.

— Patrick Thibodeau

MORE THIS ISSUE

Frank Hayes writes about the legacy of IBM's System/360. Page 66

The 360's Legacy: IBM marks the System/360's anniversary with the release of the System 360 renaissance suite.

QuickLink 46034
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IT Auditors Seek Sarb-Ox Guidance

Biggest obstacle is lack of clarity on which controls should be documented

BY THOMAS HOFFMAN

MORE THAN A dozen corporate IT auditors attending a conference here last week said they're struggling mightily to document the controls used within their IT departments in time to meet the Sarbanes-

Osley compliance deadlines that most large companies are facing late this year.

The biggest challenge in meeting the deadline for documenting internal IT controls as required by Section 404 of the Sarbanes-Oxley Act is a lack of clarity from the government entity that's overseeing compliance regarding

which controls should be documented and the best ways to do it, attendees said.

They noted that the Public Company Accounting Oversight Board hasn't told companies to use a specific methodology for documenting IT controls, such as COBIT, COSO or ISO 7799. That has made it difficult for the Big Four accounting firms and other external auditors to give advice on which IT controls need to be documented,

according to attendees.

"It's hard for us to do this when no one is able to tell us exactly what needs to be documented," said an IT auditor who works at a New York-based investment bank. Like almost all of the other auditors interviewed at the conference, she asked not to be identified.

William Powers, associate director of the accounting oversight board's inspections division in New York, said the regulatory body plans to devote a lot of attention this year to the IT controls assessment work done by public accounting firms. That work includes the risk-assessment process as well as the documentation and testing of general and application controls.

In turn, accounting firms are expected to monitor the IT risk-assessment procedures and information systems audit work that's done by their clients to meet Sarbanes-Oxley mandates, Powers added. But when asked if the oversight board plans to recommend the use of a single IT controls standard, he said, "Absolutely not."

Help on the Way

The Rolling Meadows, Ill.-based Information Systems Audit and Control Association, which hosted the conference, said it plans to roll out a Web-enabled version of the COBIT standard within a few weeks. The new release of COBIT, which is formally called Control Objectives for Information and related Technology, is designed to help IT auditors browse for best practices, do benchmarking and obtain other guidance as part of Sarbanes-Oxley compliance efforts.

In addition to the lack of guidance from regulators, IT auditors said they're also struggling with other issues as part of Sarbanes-Oxley projects. The challenges include identifying a hierarchy of controls and interfaces among

Deadline Rush Delays Internal Improvements

BY TOMMY

U.S. companies are expected to invest billions of dollars this year in technologies and consulting services to help them comply with Sarbanes-Oxley, HIPAA and other regulations. But few will be able to quickly leverage those investments to improve their internal business processes, IT executives and analysts said last week.

That's because most companies are focused on meeting rapidly approaching regulatory deadlines, according to speakers at a compliance-related conference held by IBM.

For instance, the race to meet the Sarbanes-Oxley deadline for documenting internal controls is preventing companies from making far-reaching changes to their operations as part of their projects, said Susanne Ruschka-Taylor, who works at IBM's Business Consulting Services unit.

"If you're going to spend [billions of dollars] on these initiatives, you might as well get something out of it," said Adrien Bowles, an analyst at the IT Compliance Institute, a Seattle-based research organization that focuses on government regulations and their effect on technology.

But that's easier said than done for companies that are wrestling with compliance dead-

lines for a slew of federal regulations, including Sarbanes-Oxley, the Health Insurance Portability and Accountability Act and the USA Patriot Act.

Some regulatory analysts have said it makes more sense for companies to install compliance frameworks than it does to buy stand-alone systems to support each regulation (QuickLink 44610). Such frameworks would provide users with a set of monitoring tools that they could apply

to all regulatory requirements.

"We're not that sophisticated yet, but it's something we're trying to work toward," said John Benninger, senior vice president of risk management and corporate governance at Huntington Bancshares Inc.

The Columbus, Ohio-based bank has set aside about \$500,000 for compliance with Section 404 of Sarbanes-Oxley, Benninger said. The project includes the use of IBM's Lotus Workplace for Business Controls and Reporting software. Huntington began entering data about its financial controls into the system in October. By the end of this month, it plans to go live with Version 2 of the software, which was announced last week (see box).

"I have to admit, we have a lot of work ahead of us," said David Lindstrom, chief privacy officer at Pennsylvania State University. Students at the university's School of Information Sciences and Technology are developing a wireless system based on IBM's DB2 Everywhere mobile database to create, update and delete patient records securely from any location at Penn State's Milton S. Eisenhower Medical Center.

The wireless system will help Penn State meet HIPAA's data requirements for patient privacy. But Stan August, assistant professor of information sciences and technology, said school officials haven't decided when the technology will be put into use.

Thomas Hoffman

Take Control

IT auditors working on Sarbanes-Oxley compliance projects should

FORM a project management office to organize and plan IT controls documentation efforts.

SPEND at least a few weeks describing to IT and business managers the nature of the work that needs to be done.

COMMUNICATE with business managers who "own" certain IT controls about the importance of documenting and testing them.

MAKE the documentation efforts a priority within the IT department in order to avoid funding or resource problems.

decentralized business units and trying to manage the efforts with scarce resources.

For instance, Lynn Kilroy, IT audit director at Allstate Insurance Co. in Northbrook, Ill., said she has a team of just 11 auditors who work within the company's internal audit group. By comparison, the insurer has a 5,000-person IT staff.

Companies with market capitalizations of \$75 million or more have to show they comply with Section 404 of Sarbanes-Oxley when they file their 10-K reports for fiscal years that end after Nov. 15.

Kenneth Gabriel, a consultant at KPMG LLP in Chicago, recommended that IT auditors simplify their compliance efforts as much as possible. "You don't get extra credit for this exercise," he said.

But for large companies that need to document dozens or even hundreds of IT controls in such a short period of time, the task can seem overwhelming. "For IT auditors, it's going to get a lot worse before it gets better," Kilroy said.

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REGULATION ROULETTE

Users question whether IT auditors can adequately document internal controls.

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They noted that the Public Company Accounting Oversight Board hasn't told companies to use a specific methodology for documenting IT controls, such as COBIT, COSO or ISO 17799. That has made it difficult for the Big Four accounting firms and other external auditors to give advice on which IT controls need to be documented,

according to attendees.

"It's hard for us to do this when no one is able to tell us exactly what needs to be documented," said an IT auditor who works at a New York-based investment bank. Like almost all of the other auditors interviewed at the conference, she asked not to be identified.

William Powers, associate director of the accounting oversight board's inspections division in New York, said the regulatory body plans to devote a lot of attention this year to the IT controls assessment work done by public accounting firms. That work includes the risk-assessment process as well as the documentation and testing of general and application controls.

In turn, accounting firms are expected to monitor the IT risk-assessment procedures and information systems audit work that's done by their clients to meet Sarbanes-Oxley mandates, Powers added. But when asked if the oversight board plans to recommend the use of a single IT controls standard, he said, "Absolutely not."

Help on the Way

The Rolling Meadows, Ill.-based Information Systems Audit and Control Association, which hosted the conference, said it plans to roll out a Web-enabled version of the COBIT standard within a few weeks. The new release of COBIT, which is formally called Control Objectives for Information and related Technology, is designed to help IT auditors browse for best practices, do benchmarking and obtain other guidance as part of Sarbanes-Oxley compliance efforts.

In addition to the lack of guidance from regulators, IT auditors said they're also struggling with other issues as part of Sarbanes-Oxley projects. The challenges include identifying a hornet's nest of controls and interfaces among

Take Control

a present managers in office to register and document controls documentation efforts

It's a few weeks, depending on the size of the work that needs to be done

with financial managers who need to identify and document the impact of the controls and testing them

The documentation efforts a priority within the IT department in order to avoid finding or resolving problems

Deadline Rush Delays Internal Improvements

NEW YORK

U.S. companies are expected to invest billions of dollars this year in technologies and consulting services to help them comply with Sarbanes-Oxley, HIPAA and other regulations. But few will be able to quickly leverage those investments to improve their internal business processes, IT executives and analysts said last week.

That's because most companies are focused on meeting rapidly approaching regulatory deadlines, according to speakers at a compliance-related conference held here by IBM.

For instance, the race to meet the Sarbanes-Oxley deadline for documenting internal controls is preventing companies from making far-reaching changes to their operations as part of their projects, said Suzanne Ruschke-Stein, who works at IBM's Business Consulting Services unit.

"If you're going to spend [billions of dollars] on these initiatives, you might as well get something out of it," said Adrian Daxton, an analyst at the IT Compliance Institute, a Seattle-based research organization that focuses on government regulations and their effect on technology.

But that's easier said than done for companies that are wrestling with compliance dead-

lines for a slew of federal regulations, including Sarbanes-Oxley, the Health Insurance Portability and Accountability Act and the USA Patriot Act.

Some regulatory analysts have said it makes more sense for companies to meet compliance requirements than it does to buy stand-alone systems to support such regulation (CWI 4/12/04). Such investments would provide users with a set of monitoring tools that they could apply

to all regulatory requirements.

"We're not that sophisticated yet, but if it's something we're trying to work toward," said John Benninger, senior vice president of risk management and corporate governance at Huntington Bancshares Inc.

The Columbus, Ohio-based bank has not made about \$500,000 for compliance with Section 404 of Sarbanes-Oxley, Benninger said. The project includes the use of IBM's Lotus Workplace for Business Controls and Reporting software. Huntington is preparing data about its financial controls into the system in October. By the end of this month, it plans to go live with Version 2.0 of the software, which was announced last week (see box).

"I have to admit, we have a bit of work ahead of us," said David Lindstrom, chief privacy officer at Pennsylvania State University. Students at the university's School of Information Sciences and Technology are developing a wireless system based on IBM's QR2 Everywhere mobile database to create, update and delete patient records securely from any location at Penn State's Milton S. Eisenhower Medical Center.

The wireless system will help Penn State meet HIPAA's data requirements for patient privacy. But Glen Aungst, assistant professor of information sciences and technology, said school officials haven't decided when the technology will be put into use.

—Thomas Hoffman

NEW IBM PRODUCTS

Compliance Tools

decentralized business units and trying to manage the efforts with scarce resources.

For instance, Lynn Kilroy, IT audit director at Allstate Insurance Co. in Northbrook, Ill., said she has a team of just 10 auditors who work within the company's internal audit group. By comparison, the insurer has a 5,000-person IT staff.

Companies with market capitalizations of \$75 million or more have to show they comply with Section 404 of Sarbanes-Oxley when they file their 10-K reports for fiscal years that end after Nov. 15.

Kenneth Gabriel, a consultant at KPMG LLP in Chicago, recommended that IT auditors simplify their compliance efforts as much as possible. "You don't get extra credit for this exercise," he said.

But for large companies that need to document dozens or even hundreds of IT controls in such a short period of time, the task can seem overwhelming. "For IT auditors, it's going to get a lot worse before it gets better," Kilroy said.

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REGULATION ROULETTE

Users question whether IT outsourcing can adequately document internal controls

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BRIEFS

SEC Begins Full Probe of Nortel

Nortel Networks Ltd. said the U.S. Securities and Exchange Commission has begun a formal investigation in connection with a continuing series of financial restatements. Nortel said it fully cooperated with the SEC during an informal inquiry and will continue to do so. The company is based in Brampton, Ontario, but is listed on the New York Stock Exchange and the Toronto Stock Exchange.

DOJ Looks Past Big Three ERP Vendors

American Management Systems Inc. in Fairfax, Va., said it has won a contract valued at up to \$24 million to provide finance applications to the U.S. Department of Justice. The agency's choice came just a month after it sued to block Oracle Corp.'s takeover bid for PeopleSoft Inc., saying the deal would leave SAP AG and Oracle as the only major vendors of enterprise-class ERP applications (QuickLink 45970).

First Data IT Glitch Affects Wall-Mart

Greenwood Village, Colo.-based First Data Corp., which processes electronic payments, said a computer hardware glitch caused processing errors on about 800,000 credit and debit transactions at Wal-Mart stores. Some customers were billed two or three times for a single purchase. First Data said it declined to disclose the cause of the problem.

Short Takes

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MARK HALL • ON THE MARK

AC/DC Server Maker Sashays Into ...

... fourth place on IDC's list of leading Intel server vendors, in large part by replacing competitors from Sun Microsystems. Trailing Dell, Hewlett-Packard and IBM doesn't faze Tom Barton, CEO of San Jose-based Rackable Systems Inc., which he says is "ahead of plan" to achieve 100% revenue growth this year. Granted, we're talking about racking up enough orders to hit \$100 million, roughly what IBM rakes in

over three business days. Nonetheless, the company's innovative packaging of the otherwise commodity IU (1.75-in. high) servers has led in sales that average '98 systems, or about \$250,000, per deal. One clever distinction is that Rackable's servers can take direct current (DC), um, directly without having to step alternating current (AC) through power-supply conversion. DC power can reach 93% efficiency, while AC barely tops a sloppy 67%. That difference saves on wattage consumed, reducing costs as well as heat-dissipation problems. You can also

double the number of servers on a single rack in your rack because the company uses its patented half-depth size. Because Rackable has targeted SAN users and because 80% of its servers ship with Linux, the company's systems administration tools have that user-hostile interface Unix lovers love: the command line. None of those girly Windows-like wizards and tools. Coming later this year from Rackable will be SCSI storage options, improved remote management and even bet-

ter DC hardware, Barton claims. Rackable is also wooing high-end Sun resellers, which Barton says are "desperate" to push an Intel line of machines to their Fortune 500 users. **More woes for poor Sun.** • And a wee for Microsoft is in order, too, if you believe WebMethods Inc.'s chief technology officer, Graham Glass predicts that Eclipse will overtake Microsoft's Visual Studio .Net as the No. 1 development framework. "Eclipse will have more people building things than Visual Studio," he forecasts. Glass argues that because of the breadth of corporate and academic contributors to Eclipse,

as well as its open-source nature vs. Microsoft's single-company, proprietary approach, Visual Studio is destined to be an also-ran, especially for corporate software creators. Graham is also optimistic about application integration and business-process automation projects, as long as you use Web services.

"The time is ripe now to make programs out of [Web services] parts," he says. Not surprisingly, he wants you to build these programs with Fabric,

Fairfax, Va.-based WebMethods' second-generation container for those parts. Fabric applies a set of uniform services for security, fail-over, publish, subscribe and other common attributes of a Web services application. Version 2 of Fabric is now in development. A key improvement will be the ability to link distinct Fabrics, making it easier for business partners to integrate applications in, say, a supply chain.

* Mark Westover, vice president of corporate development at Sybase Inc. in Dublin, Calif., expects his company's recently announced acquisition of XcelleNet Inc. in Alpharetta, Ga., to be complete in mid-May. The deal gives Sybase another crowbar to leverage its lead in the mobile device database market; the company hopes this will, in turn, broaden its position inside the data center. "We're using mobility as a way to drive the whole company," Westover says. Last year, mobile database revenue grew almost 20% for Sybase, while the company's overall revenue shrunk by about 20%. Westover is betting that a lot of you are busy extending custom, packaged and Web applications for mobile users and that you'll need management tools, such as those sold by XcelleNet, to control and secure the devices. That's why Sybase is willing to fork over \$95 million for the company. • How many PCs in your company are infected with spyware and adware? You don't know, do you? Well, this summer you'll be able to get a free scanning tool from Stopzilla in Boynton Beach, Fla., that will let you know if machines are infected. Once you learn how many contain the annoying and dangerous programs, you may want to use Stopzilla's service, which suppresses spyware and adware before they can pop up on your screen or steal information from PCs. A one-year subscription to the service costs \$29.95 per PC, but that rate is discounted as more PCs are added. And there's a 15-day free trial for you sleepies. • 46066



Users Call for a Lighter Linux

BY ROBERT MCILLIAN

At the ClusterWorld Conference & Expo in San Jose last week, Linux users and distributors debated whether Linux distributions should become simpler or more complex.

Rusty Lusk, a senior computer scientist at Argonne National Laboratory in Urbana, Ill., called on vendors to build smaller, more lightweight Linux distributions based on a modular, more easily managed

architecture. That approach would reduce the complexity inherent in Linux and the "dependency" problems that occur when programs require different versions of the software libraries included in Linux, he said. "With big distributions, there are so many problems with version dependencies," Lusk said.

A systems integrator agreed that a lightweight distribution would help manage Linux's

complexity. "Having that minimal installation and then being able to build on it, at least for our customers, is a real important aspect," said Henry Hall, president of Wild Open Source Inc. in Burlington, Mass.

He also called for tools that would let users track and audit changes they make to the operating system's kernel.

Donald Becker, one of the creators of the Scyll Linux distribution, predicted that distributions will become more

complex, not less. "I think we're going to see the completely opposite approach," said Becker, chief technology officer at Penguin Computing Inc. in San Francisco.

Scyll, for example, looks to add as many different packages as possible to its distribution, but it also gives customers the option of "ignoring" components they don't need, he said. • 46177

McMillian writes for the IDG News Service.

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Mark Hall is a San Jose-based writer who has covered the business side of the tech industry for more than 10 years. He is the author of the book "The Real Time Data Revolution: How the New Tools Already Working with Applications Using Oracle and SQL Server Databases." He can be reached at mhall@earthlink.net. Sybase late this year will offer QBE in 2005. Pricing starts around \$30,000.

Users Call for a Lighter Linux

BY ROBERT MCILLIAN

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Hello Customers

Users Want More Ties Between Storage, Systems Management

Seek comprehensive IT management frameworks, not more stand-alone tools

BY LUCAS MEARIAN
moderis

Users at Storage Networking World here said they want storage management technology that can be sold to corporate executives as part of an overall systems management strategy, not just stand-alone tools.

"We can't have storage tools that are disconnected from the tools we use to manage our applications," Intel Corp. CIO Doug Busch said during an opening speech. Busch rattled off a list of issues that he and other IT leaders are facing as a result of the lack of comprehensive IT management frameworks offering logical and physical views of both business and storage systems.

For example, Intel's IT department is wrestling with questions such as how it should charge business units

for their use of storage resources and for storage purchases or upgrades, Busch said.

STORAGE NETWORKING WORLD

Laurence Whitaker, supervisor of enterprise storage management at Hudson's Bay Co. in Toronto, said his top issues include the difficulty of justifying investments in storage management tools and a lack of integration between back-office systems and applications like hierarchical storage management.

Still sorely lacking are storage resource management tools that can automate tasks such as provisioning storage for a database and notifying systems administrators if an application server has used a predefined percentage of its storage capacity, said Dennis Martin, an analyst at Evaluator Group Inc. in Englewood, Colo.

"This is where the battleground is today," Martin said. "What if a port goes out on a [storage networking] switch? I want to know what business processes that's impacting." Some attendees also said



We can't have storage tools that are disconnected from the tools we use to manage our applications.

DOUG BUSCH CIO INTEL CORP

they see information life-cycle management — the process of managing data from creation to deletion and moving it to different types of storage devices — as so important emerging technology that could help companies better optimize resources.

But for now, ILM is just a buzzword, Martin said. "Vendors need to bring their 20 products down to one," he said. "I've gone from believing vendors to having them show me what their product can do," said Andre Mendes, chief technology integration officer at the Public Broadcasting Service in Alexandria, Va.

Mendes added that he doesn't buy into the argument for ILM; he thinks storage management tools create enough of a layer of abstraction that most systems administrators can manage large amounts of data without full automation.

Lynn Neal, a senior systems integrator for Sprint Corp.'s internal IT operations, said executives at Sprint want IT to do more with the technology it already has on hand. "They don't want us to buy any more equipment," she said. "They want us to in-



I've gone from believing vendors to having them show me what their products can do.

ANDRE MENDES CHIEF TECHNOLOGY INTEGRATION OFFICER PBS

crease utilization." But Neal said IT staffers haven't had much success getting end users to adopt data-retention policies that would require fewer copies of identical information and move nonessential data to less-expensive storage devices such as tape libraries or midrange and ATA disk arrays. Neal said some Sprint users maintain as many as five copies of a database when a single one would do. **46123**

Continued from page 1

Storage

company's products likely will never account for 100% of the storage capacity as an enterprise-class data center, Detert said, adding that they should "either play the interoperability game or get out."

But IT managers attending a meeting of the SNA End User Council questioned whether vendors would support full management of their products via the SMI-5 interface.

Joseph Goins, CEO of Intelli-Browse Inc. in Milton, Wash., said he thinks SMI-5 compliance will trail behind development of proprietary management application programming interfaces by vendors that want to sell their own tools.

One user, who didn't identify himself, said some of his

vendors are using a software abstraction layer to give the appearance of SMI-5 compliance but are actually relying on API-sharing agreements with other vendors to perform management functions. "They want to keep their APIs as a differentiator," he said.

The SNA needs to build more credibility for its conformant program by challenging vendors to make their products fully compliant with SMI-5 instead of trying to retain a management edge for their own software, said Mike Alvarado, chief operating officer at Toigo Partners International LLC in San Jose.

The vendors that passed the SMI-5 compliance tests include storage heavyweights such as EMC Corp., Hitachi Data Systems Corp., Hewlett-Packard Co., IBM and Network Appliance Inc.

Ray Dunn, chairman of the SNA's Storage Management Forum, called last week's announcement "a monumental achievement" and predicted that SMI-5 will be adopted in all new storage devices by the end of next year.

Lynne Van Arsdale, the SNA's liaison to the End User



Council, said vendors will lag in supporting full control of their hardware through SMI-5 compared with their own APIs. But that usually happens only when they release new technology, she added.

"There's a strong sentiment among end users that they want this and they'll only choose products that fit into a heterogeneous environment," Van Arsdale said. "The vendors understand this."

It was clear at Storage Networking World, which was jointly sponsored by Computerworld and the San Francisco-based SNA, that many users are looking for easier-to-use SAN management tools.

John Clarke, a storage architect at Thomson Legal & Regulatory in Eagan, Minn., said his company has 400 TB to 500 TB of storage capacity on its data center floor. It recent-

ly lost a systems administrator, leaving seven people to manage about 60 TB each.

"It's a complex environment, and I have to make it easier to manage because I'm not going to be able to hire more people," Clarke said.

"The comment I heard from a vendor yesterday was distressing," said Kevin McNamara, a senior enterprise architect at Motorola Inc., during the End User Council's discussion about the SMI-5 interface. "They're still going to work through API agreements with various vendors, which would lead one to believe there's more work needed on that spec." **46118**

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BRIEFS

Unisys Says CEO Plans to Step Down

Unisys Corp. announced that top executive Lawrence Wozniak has given up responsibility for day-to-day operations and will step down as CEO in January. Joseph McGrath, who had been in charge of IT services, was named president and chief operating officer. Unisys also gave George Skarwinski, the head of its systems division, the additional title of vice chairman. Wozniak plans to remain as chairman until January 2006.

JBoss Drops Rival Event to JavaOne

The JBoss Group LLC, which offers open-source application server software, is discontinuing a user conference it had last year as a rival to Sun Microsystems Inc.'s JavaOne event. Atlanta-based JBoss said it will take part in this year's JavaOne, which is scheduled to start June 28 in San Francisco. JBoss and Sun settled a dispute over Java certification last November.

IBM Agrees to Buy Indian Outsourcer

IBM said it has agreed to buy Dutch services P.T.A., a Gurgaon, India-based outsourcer that offers technical support, call center and back-office business services. Dutch, which has about 6,000 employees, will become part of IBM's business consulting services unit. IBM didn't disclose the purchase price.

Short Takes

THE INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS added a federal judge in California to dismiss six of the seven claims made by VERSION INC. in a lawsuit filed in January. . . . Sun Microsystems, Calif.-based KEYNOTE SYSTEMS INC. has bought Mac-Ruler Corp., a Mountain View, Calif., vendor of tools for gathering feedback about Web sites.

Continued from page 1

Vendors

group conference here.

Vendors still "steer the users to their vision," said James Ridder, a Lyndhurst, N.J.-based data center manager for the Memorial Sloan-Kettering Cancer Center. He added that he has seen little change in how vendors operate.

But the downturn in IT spending over the past several years has given users a little more power, others argued.

"I think vendors are listening more, and they have to listen more, simply to survive," said Don Tissell, server facilities manager at Frito-Lay Inc. in Plano, Texas. Kent Howell, manager of computer operations at Illinois Power Co. in Decatur, said he believes that economic conditions and expanding technology choices are empowering users.

For instance, Howell said he recently dropped some mainframe tool vendors that had "predatory pricing" practices. "There are competitors out there willing to cut deals to get their foot in the door. And we're not opposed to taking advantage of those opportunities," even if it means giving up functionality, he added.

Sun is in the eye of that particular storm, with its Unix servers facing growing competition from low-cost, Intel-based servers running Linux. On the same day it announced its agreement with Microsoft, Sun posted a quarterly net loss and said it was cutting its workforce by 3,300 employees.

Sun officials said the specifics of how users will benefit from promised interoperability improvements haven't been formulated. "We have yet to even put the liaison teams together to go meet and talk about the next steps," said John Lolicano, who replaced Louis Schwartz as head of Sun's software division. Schwartz's promotion to president and chief operating officer was made public when Sun announced the Microsoft accord.

But Pat Ridder, manager of computer operations at Maricopa Integrated Health System, a regional health care provider in Phoenix, said he believes users will see some clear benefits in the form of lower maintenance costs.

"Sun is to midrange hardware what Microsoft is to software: Sun makes some of the best hardware around," said Ridder. But, he added, server software maintenance is costly.

If the two companies "are really looking at more interoperability between their hardware," Ridder said, the result will be a larger pool of people with skills to address issues on both platforms, potentially lowering maintenance costs.

Users remain divided on the

They have a long way to go to show that they have our best interests at heart.

KEN LAMBERT, MANAGER OF SYSTEM SOFTWARE, ASSOCIATED THIRD PARTY ADMINISTRATORS INC.

likelihood that the Sun-Microsoft accord will prompt other vendors to form interoperability agreements.

"Unfortunately, a lot of vendors haven't gotten into the interoperability trend," said Dennis Reid, opera-

tions manager at Time Customer Service Inc., the Tampa, Fla.-based order fulfillment center for publisher Time Inc.

But the demand of interoperability is growing as enterprises improve integration across business units and supply chains, develop Web services and consider technologies such as grid computing.

"Customers are not going to tolerate this noncommunication between vendors," said Barbara McFadden, director of

the Institute for Data Center Professionals at Marist College in Poughkeepsie, N.Y.

One thing is clear: Users who spoke with Computerworld last week said they won't be convinced of the sincerity of Sun and Microsoft until they see tangible benefits.

"Do I expect anything great and wonderful out of their newfound friendship? No," said Ken Lambert, manager of system software at Associated Third Party Administrators Inc., a financial management firm in Alameda, Calif. "I think they have a long way to go to show that they have our best interests at heart. If they are about to prove me wrong, that would be wonderful." □ 46174

MORE ONLINE

Microsoft can buy of Sun legal threats

QuickLink 46182

www.computerworld.com

Identity Management Will Benefit From Accord, Exec Says

The interoperability agreement between Sun Microsystems and Microsoft will make it easier and cheaper for companies to manage user identities across both vendors' environments, according to John Fowler, Sun's chief technology officer.

But he didn't say when users can expect to see those benefits or specifically how the company's products must be tweaked to enable such interoperability.

"We are very interested in seeing these Microsoft and Sun environments play together," said Eric Greenwald, a research fellow at the Idaho National Engineering and Environmental Laboratory in Idaho Falls. The lab is setting up a facility for high-performance computing that will run a variety of Unix systems, including Sun's Solaris. It is looking for an efficient way to exchange and manage identity information among these systems and its existing

Windows-based office systems.

"Hopefully this agreement means that some mechanisms will be created such that we don't have two completely disjointed environments," Greenwald said.

Brian Conlon, COO at Housley Simon Arnold & White LLP in Washington, said his law firm has coded a special software layer

for transporting identity information between Active Directory and Sun's directory environment. "Anything by way of integration between the two is going to be a great first step," Conlon said, adding that he really wants the ability to maintain a single user database for authorizing



John Fowler, Sun's chief technology officer, says the Sun-Microsoft accord will help promote interoperability.

ing and provisioning access to applications in both environments.

Sun's agreement with Microsoft will accelerate the company's efforts to foster better interaction between the two technology environments, Fowler said.

noting that Sun has already taken several steps to promote interoperability. For instance, Sun's Java System Directory Server supports password and attribute synchronization with Microsoft's Active Directory. Users' passwords stored in either Active Directory or Directory Server can be synchronized both ways, making for easier administration, he said.

Sun's purchase of Austin-based identity-management software vendor Wovenet Technologies Inc. late last year [QuickLink 42934] is another step toward integration. Wovenet's technology in combination with Sun's identity management software will give users a way to automate and centrally manage identity and application provisioning functions across a wide range of operating systems, Fowler said.

Users can expect more work to enable single sign-on and to bring the Liberty Alliance Project and WS-Federation Web services specifications closer, Fowler said, without elaborating. —Jeffrey Vigney

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Ken Pasley
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Ken Pasley provides leadership for the FedEx Express worldwide wireless and mobile architecture. In this position he oversees strategy, engineering and development of wireless technology including FedEx PowerFed, FedEx Private Network and Bluetooth implementation.



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- 12:00pm Pre-Conference Golf Outing
- 1:30pm Concurrent Industry Pipelines and Technology Workshop
- 1:30pm - Industry Pipeline 18 sessions (20 minutes in length)
- 2:00pm - Technology Workshop (90 minutes in length)
- 7:00pm Welcome Reception

TUESDAY, MAY 25

- 7:00am Buffet Breakfast
- 8:00am Welcome and Opening Remarks
- 8:15am Opening Keynote Presentation
- 9:00am - Noon General Sessions
- 1:00pm - 3:30pm Luncheon and Special Presentation
- 3:30pm - 5:00pm Concurrent Breakout Sessions
- 5:00pm Solutions Showcase & Expo with Buffet Dinner

WEDNESDAY, MAY 26

- 7:00am Buffet Breakfast
- 8:00am Opening Remarks
- 8:15am Opening Keynote Presentation
- 9:00am - 12:15pm General Sessions
- 12:15pm Solutions Showcase & Expo with Buffet Lunch
- 1:30pm - 3:45pm General Sessions
- 3:45pm - 5:00pm Technology "Spotlight" Innovation on Stage
- 6:00pm Gala Evening

THURSDAY, MAY 27

- 7:30am Buffet Breakfast
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| 8:45am to 9:15am | User Case Study |
| 9:15am to 9:45am | Business Intelligence in Action at NASD Marnie Colburn, EVP and CTO, National Association of Securities Dealers |
| 9:45am to 10:15am | Refreshment and Networking Break |
| 10:15am to 10:45am | Evolving the Enterprise: Leveraging Information for Competitive Gain Jim Davis, Senior Vice President, SAS |
| 10:45am to 11:15am | Industry Analyst Perspective |
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MARYFRAN JOHNSON

Customers in Charge

NO QUESTION ABOUT IT, this one belongs to you. IT customers were the driving force, the ultimate bottom line, the wake-up-to-reality call behind the historic Sun-Microsoft accord announced the

morning of April 2 [QuickLink 49970]. Scott McNealy and Steve Ballmer spoke softly but carried a big peace treaty with your names on it—wrapping up years of angry rhetoric and a fierce, often counterproductive rivalry that bedeviled enterprise IT operations with interoperability headaches and unnecessary expense.

"We're in a new era of customer-driven competition," Ballmer said. McNealy agreed, "The customer is in charge."

No kidding. But were you impressed by this dramatically staged ending to the industry's most legendary feud? Well, not exactly.

"I want to see something concrete and real," said Daniel Morreale, CIO at the North Bronx Healthcare Network in New York, viewing what was no doubt the skeptical reaction of many of his peers across the nation.

Tony Scott, chief technology officer at General Motors, was quoted in *The Wall Street Journal* about his pointed advice to both CEOs to get their acts together. He's had to educate the pair on "the real pain that customers go through when you have multiple incompatible standards and technologies."

That message seems to have finally struck its target. McNealy and Ballmer, usually glib and cheerfully combative with the press, were subdued and serious at the announcement of their truce. Once the initial element of surprise wears off, they'll have a lot to prove. As technology buyers have gained more power

over suppliers, they've lost patience with petty product warfare.

"It's good that there is going to be an era of co-operation, but what does it really mean to people?" asked Sarish Ajmani, CIO of the Santa Clara County government in Sun's home state of California. "What are they going to deliver that's different from what we

have today, and will it result in an overall cost reduction for us?"

Answering those questions had better be the primary focus of both vendors as they move into détente. Microsoft will pay its longtime rival \$1.6 billion to settle Sun's antitrust suit and resolve several patent claims. Far more meaningful to users, however, is the potential of the 10-year commitment to collaborate on technology and to license

each other's intellectual property.

Customers will be waiting—and not all that patiently—to see the concrete follow-through on those lofty assurances of improvements in server integration, easier interoperability between products such as Java and .Net, and seamless support of each other's protocols.

Beyond the customer issues, some significant external factors also took a turn behind the wheel of this deal.

Both companies are worried about the rise of Linux and the ever-present threat of IBM's enterprise dominance. Sun has suffered through years of financial setbacks and faces yet another quarterly loss and an upcoming layoff of 3,300 employees. Microsoft has spent tens of millions of dollars in courtroom battles over antitrust issues, and its stinging defeat last month by the European Commission moved its legal troubles as a monopolist onto the world stage.

What both vendors now face is a journey just as arduous as the year of secret talks that brought them this far. They must now mutate 15 years of competitive DNA, convince thousands of startled employees to embrace the enemy and finally redjust to a new reality. The one where customers are in charge. **☐ 46098**



PIMM FOX

ISPs Have to Step Up on Security

LIKE THE GASOLINE you put in your car, the services that Internet service providers offer are basic commodities. Sure, the ISPs make some efforts to differentiate themselves: Juno offers free e-mail addresses, Road Runner has lots of available Web space, and America Online will give you free technical help lines. All for similar monthly fees.

But where's the security? Where are the firewalls?

Internet service providers do all they can to get listed on Google and Yahoo, and they dump bundles on advertising and marketing.

But try to find information from them about their security features, and you'll grow old and weary.

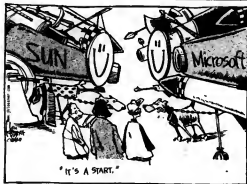
And this isn't just about fighting the spam that clogs your e-mail pipes.

This is about hackers.

While AT&T's Worldnet service and its brethren are enriching our world with personal information management features, they're also enriching the arsenal of weapons at the disposal of hackers. Hackers don't need big corporate servers or complicated virus programs; they've got unwitting accomplices who have been fed a steady diet of all-you-can-eat, always-on, high-speed Internet connections.

The horror of horrors is an open Digital Subscriber Line or cable connection with no firewall protection. No, I take that back. The real horror is a wireless configuration with DSL or cable. It's the unlocked door a hacker is looking for as he's being driven around your neighborhood (presumably while eating pizza in the back seat) seeking computers to break into while everyone is asleep.

By gaining access to a home user's bandwidth, a hacker can launch worm attacks that then spread throughout the network.



Taking advantage of these back doors, a hacker can attack with impunity. After all, it's the home user who is going to be pegged as the offender. And there's worse in store than having the PC in your den used to launch attacks. The FBI says identity theft is the most pervasive and fastest-growing form of nonviolent crime.

Once someone has access to the personal information stored inside a computer, it's as easy to replicate an ID as it is to say "Keanu Reeves."

Hackers are going to be deflected only if service providers make security the top priority in their offerings and their sales pitches. It's time they tried to differentiate their services by boasting about their security features and their spam filters.

Unfortunately, they're too busy waging price wars against one another and selling unimportant services and pop-up windows. Saving a few pennies on Internet service won't matter one bit when a hacker snags personal tax data and stored credit card numbers, or when e-mail address books become spam generators.

Internet service providers might whine that people won't pay for hefty security features or spam filtering. But would any of them care to be differentiated as the first ISP to be slapped with a nice fat lawsuit accusing it of aiding and abetting identity theft?

That ought to make them feel special. **CT 45889**

DAN GILLMOR

It's Time to Take Privacy Seriously

DO YOU KNOW where your customers' data is tonight? And what you're doing with it?

Data privacy woes are rampant. Every week, we hear about another debacle or encroachment on what should be a private sphere. And regular folks are getting angrier by the day.

IT, albeit reluctantly, is at the heart of the problem. But IT must also assist on being part of the solution.

Mistakes are increasingly easier to make. One reason is the offshoring trend. Last year, for example, a medical transcriptionist in Pakistan threatened to release U.S. patients' data if his de-

mands for higher payments weren't served. The U.S.-based company that farmed out the work later told the San Francisco Chronicle that its business had been his hard by fallout from the disclosure — perhaps a fitting outcome.

Although it's not clear how much private data is now being sent overseas, there's no doubt that the amount is growing. And companies that don't exert the strongest controls over the information they send offshore are opening themselves up not just to financial trouble but also to a massive and well-deserved backlash.

IT departments can't control a transnationalist making demands halfway around the world. But they can avoid preventable stupidity.

As The Washington Post reported in February, it's astonishingly easy to do a search on Google and other popular search engines and find Social Security numbers and other data that companies, universities and even government



agencies have put on unprotected servers. Google isn't responsible for preventing these lapses; the careless data managers are.

Plugging such holes is simple compared with fixing some other security risks. "Flushing" attacks — where unsuspecting consumers fork over credit card numbers and other personal information on bogus Web sites that look like the real thing — are all too common. Companies can't stop the creation of rogue sites, but they can communicate better with customers about how to avoid being victims.

A chorus of complaints met last year's California law mandating disclosure to consumers of serious breaches of corporate databases. But I maintain that the law did businesses a favor by forcing them to work harder to keep data secure and encouraging them to set up crisis plans in the event that hackers get through their firewalls.

It's routine to assume that garnering more data is better. The ability to store

everything under the sun is growing along with disk space. If your company sells widgets that end up in consumers' homes and you plan to put radio-frequency identification tags on these goods to help make the supply chain more efficient, that's great. But you should be planning now to make sure the tags stop working when they leave the store, because people like me will shout from the rooftops if you don't.

No matter how much data you collect, IT staffs should convince CEOs — who in turn should convince CEOs — that it's far better to build more protections into databases early than to attempt to bolt it on later. And they should convince them to support stronger privacy laws while they're at it.

I can promise this: As identity theft soars, personal medical histories escape and cause all kinds of trouble, and privacy violations become more and more notorious, the public will start demanding more safeguards. **CT 45953**

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READERS' LETTERS

Offshoring Rhetoric Is Disingenuous

IT WASN'T sure how changed. It was just a few years ago that IT salaries were skyrocketing and employers couldn't find enough skilled IT workers. My computer professional colleagues were growing salaries and the ability to choose among multiple job offers.

Today, we're faced with a flood of jobs moving overseas and an uncertain professional future. It is disingenuous, however, to use terms such as greedily and profitless to describe companies that outsource, as many Computerworld readers have done in recent letters. I would argue that companies are making calculated business decisions, just as we were several years ago when we were accepting jobs from the highest bidder. I don't recall similar derogatory terms being directed toward us in our time.

The outsourcing phenomenon is indeed troubling and lacks any easy resolution. Labeling it a result of greed and callousness by management, however, is simplistic and misinformed. It is understandable that we IT professionals feel strong-

ly about the issue, but let's take the inflammatory rhetoric as we search for a solution.

Scott Corley
Mountain View, Wash.

It Pays to Look Before You Lease

NORBERT A. KOVILAKIS article "The Case for IT Leasing" (QuickLink 45412) misses the mark on at least two important considerations. For one, unless the lease is for a very short term (less than two years), it's unlikely that the cost of leasing will be 30% or less than a financed purchase over the same time frame. After years of losing their shirts, leasing companies have gotten technology savvy and recognize the quickly declining market value of equipment.

But even more important, when making a lease-or-buy decision, one needs to consider what will happen at the end of a lease. Generally, you're left with two options, both of which could cause you some surprise: return the equip-

ment (requiring you to start again and disrupt operations) or buy at market value (leaving you, at best, at the same point you would have been had you just bought and financed). Also, your cost of leasing what to do is fixed in time (the specific date the lease expires), whereas if you had made a financed purchase, you could decide at any point to get out of it.

Bottom line: There are some situations where leasing may make sense, but look very carefully before jumping in.

Sonney Taragin
CAO, Williams Scotsman Inc.,
Baltimore; sonney.taragin@williams.com

EC's Microsoft Fine Is More Like a Tariff

IT'S SURE we could find some reason to levy a couple of \$200 million fines on Italian clothes, French wines or German automobiles ("Microsoft: \$610M EU Fine Too Big," QuickLink 45663). A huge fine like the one the European Commission has levied against Microsoft sounds like a tariff, and the

trouble with this kind of thing is that it sets off trade wars and other kinds of reprisals. The world has been down that path before; it never comes out positively.

It's time for the U.S. State Department to have some quiet, secret talks with those European allies. And if the discussions don't work, there should be the Italians, the Dutch, the Germans, etc., still get the point across. Then every body drops everything, we all shake hands again, and we get on with world business.

Richard Power
Attorney at law,
Shelton Springs, Calif.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eccle, letters editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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Customers in Charge

NO QUESTION ABOUT IT, this one belongs to you.

IT customers were the driving force, the ultimate bottom line, the wake-up-to-reality call behind the historic Sun-Microsoft accord announced the

morning of April 2 [Quicklink 49970].

Scott McNealy and Steve Ballmer spoke softly but carried a big peace treaty with your names on it—wrapping up years of angry rhetoric and a fierce, often counterproductive rivalry that bedeviled enterprise IT operations with interoperability headaches and unnecessary expense.

"We're in a new era of customer-driven competition," Ballmer said. McNealy agreed, "The customer is in charge."

No kidding. But were you impressed by this dramatically staged ending to the industry's most legendary feud? Well, not exactly.

"I want to see something concrete and real," said Daniel Morroale, CIO at the North Bronx Healthcare Network in New York, voicing what was no doubt the skeptical reaction of many of his peers across the nation.

Tony Scott, chief technology officer at General Motors, was quoted in *The Wall Street Journal* about his pointed advice to both CEOs to get their acts together. He's had to educate the pair on "the real pain that customers go through when you have multiple incompatible standards and technologies."

That message seems to have finally struck its target. McNealy and Ballmer, usually glib and cheerfully combative with the press, were subdued and serious at the announcement of their truce. Once the initial element of surprise wears off, they'll have a lot to prove. As technology buyers have gained more power

over suppliers, they've lost patience with petty product warfare.

"It's good that there is going to be an era of co-operation, but what does it really mean to people?" asked Satish Ajmani, CIO of the Santa Clara County government in Sun's home state of California. "What are they going to deliver that we

have today, and will it result in an overall cost reduction for us?"

Answering those questions had better be the primary focus of both vendors as they move into détente. Microsoft will pay its longtime rival \$1.6 billion to settle Sun's antitrust suit and resolve several patent claims. Far more meaningful to users, however, is the potential of the 10-year commitment to collaborate on technology and to license

each other's intellectual property.

Customers will be waiting—and not all that patiently—to see the concrete follow-through on those lofty assurances of improvements in server integration, easier interoperability between products such as Java and .Net, and seamless support of each other's protocols.

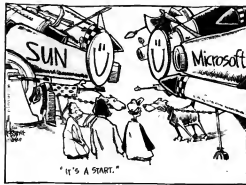
Beyond the customer issues, some significant external factors also took a turn behind the wheel of this deal.

Both companies are worried about the rise of Linux and the ever-present threat of IBM's enterprise dominance. Sun has suffered through years of financial setbacks and faces yet another quarterly loss and an upcoming layoff of 3,300 employees. Microsoft has spent tens of millions of dollars in courtroom battles over antitrust issues, and its stinging defeat last month by the European Commission moved its legal troubles as a monopolist onto the world stage.

What both vendors now face is a journey just as arduous as the year of secret talks that brought them to this far. They must now mutate 15 years of competitive DNA, convince thousands of startled employees to embrace the enemy and finally readjust to a new reality. The one where customers are in charge. ☎ 4608



Interviews are done in style in chief of Computerworld. You can contact her at emcnealy@computerworld.com



ISIs Have to Step Up on Security

LIKE THE GASOLINE you put in your car, the services that Internet service providers offer are basic commodities. Sure, the ISPs make some efforts to differentiate themselves. Juno offers free e-mail addresses, Road Runner has lots of available Web space, and America Online will give you free technical help lines. All for similar monthly fees.

But where's the security? Where are the firewalls?

Internet service providers do all they can to get listed on Google and Yahoo, and they dump bundles on advertising and marketing.

But try to find information from what about their security features, and you'll grow old and weary.

And this isn't just about fighting the spam that clogs your e-mail pipes.

This is about hackers.

While AT&T's Worldnet service and its brethren are enriching our world with personal information management features, they're also cranking the arsenal of weapons at the disposal of hackers. Hackers don't need big corporate servers or complicated virus programs; they've got unwitting accomplices who have been fed a steady diet of all-you-can-eat, always-on, high-speed Internet connections.

The horror of horrors is an open Digital Subscriber Line or cable connection with no firewall protection. No, I take that back. The real horror is a wireless configuration with DSL or cable. It's the unlocked door a hacker is looking for as he's being driven around your neighborhood (presumably while eating pizza in the back seat) necking computers to break into while everyone is asleep.

By gaining access to a home user's bandwidth, a hacker can launch worm attacks that then spread throughout the network.



Frank Pao is a London-based journalist. Contact him at frank@pao.com

taking advantage of these back doors, a hacker can attack with impunity. After all, it's the home user who is going to be pegged as the offender.

And there's worse in store than having the PC in your den used to launch attacks. The FBI says identity theft is the most pervasive and fastest-growing form of nonviolent crime.

Once someone has access to the personal information stored inside a computer, it's as easy to replicate an ID as it is to say "Kenan Reeves."

Hackers are going to be defeated only if service providers make security the top priority in their offerings and their sales pitches. It's time they tried to differentiate their services by boasting about their security features and their spam filters.

Unfortunately, they're too busy waging price wars against one another and selling unimportant services and pop-up windows. Saving a few pennies on Internet service won't matter one bit when a hacker snags personal tax data and stored credit card numbers, or when e-mail address books become spam generators.

Internet service providers might whine that people won't pay for hefty security features or spam filtering. But would any of them care to be differentiated as the first ISP to be slapped with a nice fat lawsuit, accusing it of aiding and abetting identity theft?

That ought to make them feel special. **© #5089**

It's Time to Take Privacy Seriously

DO YOU KNOW where your customers' data is tonight? And what you're doing with it?

Data privacy woes are rampant. Every week, we hear about another debacle or encroachment on what should be a private sphere. And regular folks are getting angrier by the day.

IT, albeit reluctantly, is at the heart of the problem. But IT must also assist in being part of the solution.

Mistakes are increasingly easier to make. One reason is the offshoring trend. Last year, for example, a medical transcriptionist in Pakistan threatened to release U.S. patients' data if his de-

mands for higher payments weren't met. The U.S.-based company that turned out the work later told the *San Francisco Chronicle* that its business had been hit hard by fallout from the disclosure — perhaps a fitting outcome.

Although it's not clear how much private data is now being sent overseas, there's no doubt that the amount is growing. And companies that don't exert the strongest controls over the information they send offshore are opening themselves up not just to financial trouble but also to a massive and well-deserved backlash.

IT departments can't control a transcriptionist making demands halfway around the world. But they can avoid preventable slipshod.

As The Washington Post reported in February, it's astonishingly easy to do a search on Google and other popular search engines and find Social Security numbers and other data that companies, universities and even government



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agencies have put on unprotected servers. I ought not be responsible for preventing these lapses, the careless data mungers insist.

Plugging such holes is simple compared with fixing some other attacks. "Phishing" attacks where unsuspecting consumers look over credit card numbers and other personal information on bogus Web sites that look like the real thing — are all

too common. Companies can't stop the creation of rogue sites, but they can communicate better with customers about how to avoid being victims.

A chorus of complaints met last year's California law mandating disclosure to consumers of serious breaches of corporate databases. But I maintain that the law did businesses a favor by forcing them to work harder to keep data secure and encouraging them to set up crisis plans in the event that hackers get through their firewalls.

It's naive to assume that gathering more data is better. The ability to store

everything under the sun is growing along with disk space. If your company sells widgets that end up in consumers' homes and you plan to put radio-frequency identification tags on these goods to help make the supply chain more efficient, that's great. But you should be planning now to make sure the tags stop working when they leave the store, because as people like me will shout from the rooftops if you don't.

Summer has much data you collect. IT staffs should convene with folks who in turn should convene. Find out what's better to build more protection into databases early than to attempt to bolt it on later. And they should convene them to support stronger privacy laws while they're at it.

I can promise this: As identity theft soars, personal medical histories emerge and come all kinds of trouble, and privacy violations become more and more horrific, the public will start demanding some scale. **© #5093**

WANT OUR OPINION?

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Offshoring Rhetoric Is Disingenuous

THOSE SURE HAVE changed IT was just a few years ago that IT salaries were skyrocketing and employers couldn't find enough skilled IT workers. We computer professionals were earning growing salaries and the ability to choose among multiple job offers.

Today, we have a flood of jobs moving overseas and an uncertain professional future. It is disingenuous, however, to use terms such as greed and jealousy to describe companies that outsource. In many Computerworld readers have done in recent letters. I would argue that companies are making calculated business decisions, just as we were several years ago when we were accepting jobs from the highest bidder. I don't recall similar derogatory terms being directed toward them when the job market was in our favor.

The outsourcing phenomenon is indeed troubling and results in easy labeling. Labeling it a lack of greed and callousness by management, however, is simplistic and misinformed. It is understandable that we IT professionals feel angry

ly about this issue, but let's table the inflammatory rhetoric as we search for a solution.

Scott Corley
Minnetonka, Minn.

It Pays to Look Before You Lease

NORBERT J. RUBINSTEIN's article "The Case for IT Leasing" (*QuickLink* 45412) misses the mark on at least two important considerations. For one, unless the lease is for a very short term (less than two years), it's unlikely that the cost of leasing will be 30% to 60% less than a financed purchase over the same time frame. After years of leasing their fleets, leasing companies have gotten technology savvy and recognize the quickly declining market value of equipment.

But even more important, when making a lease-or-buy decision, one needs to consider what will happen all the end of a lease. Even today, you're left with two options, both of which could create you some surprises: return the equip-

ment (requiring you to start again and disposal operations) or buy at market value (knowing you at best, at the same point you would have been had you just bought and it been paid). Also, your point of deciding what to do is based in time (the specific date the lease expires) whereas if you had made a financed purchase, you could decide at any point to get out of it.

Bottom line: There are some situations where leasing may make sense, but look very carefully before jumping in.

Sanjay Targuin
CIO, Williams-Sonoma Inc., Redwood City
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EC's Microsoft Fine Is More Like a Tariff

IT'S SURE we could find some excuse to levy a couple of \$500 a year on laptop clocks, French wines or German automobiles ["Microsoft \$60M EU Fine Too Big," *QuickLink* 45663]. A huge fine like the one the European Commission has levied against Microsoft sounds like a tariff, and the

trouble with this kind of thing is that it sets off trade wars and other kinds of reprisals. The world has been down that path before; it never comes out positively.

It's time for the U.S. State Department to have some quiet secret talks with those European kings. And if the discussions don't work, then we should line the Italians, the Dutch, the Germans, etc., until we get the point across. Then everybody drops everything, we all shake hands again, and we get on with world business.

Richard Pinner
Attorney at Law,
Shingle Springs, Calif.

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TECHNOLOGY

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Building a Model Infrastructure

Advanced modeling tools can help users accurately forecast what kind and quantity of IT equipment to buy and avoid overprovisioning. **Page 26**

QUICKSTUDY 64-Bit CPUs

A 64-bit microprocessor can address far more memory and handle more processes simultaneously than a CPU that processes only 32 bits at a time. **Page 28**

SECURITY MANAGER'S JOURNAL

Building a Defense Against Complaints

Defending the company against complaints from the public takes nearly as much effort as protecting it from cyberattacks. Vince Tuesday discovers. **Page 30**

TEARING IM DOWN BARRIERS



More companies are adopting enterprise instant messaging systems, but interoperability issues often limit their reach to external customers and partners. **BY KYM GILHOOLY**

FOR BUSINESSES eager to exploit the efficiencies of real-time communications, instant messaging can be a nonsplendorous thing. The problem is that in most corporations, it's also a many-vended thing. Witness Rochester Public Utilities (RPU). Although the Rochester, Minn.-based municipal utility has deployed an enterprise-class IM system based on Microsoft Corp.'s Live Communication Server, employees still use public IM networks such as those of MSN Messenger and AOL Instant Messenger (AIM).

Though it would simplify management and remove interoperability hurdles to standardize on one IM system, RPU can't shut down access to public networks, because some employees use them to maintain relationships with corporate customers. For instance, RPU uses America Online Inc.'s AIM to communicate with one of its biggest customers, IBM's Rochester facility. The IBM office uses the IM product from IBM's Lotus subsidiary internally but has developed client-level interoperability between Lotus Instant Messenger and AIM (although, according to IBM, new releases of Lotus IM won't provide such interoperability).

"We had rogue IM users using Port 80 to communicate externally, but most of these were legitimately communicating with vendors and customers," says Matt Bushman, an IT analyst at RPU. "We realized that IM was going to be the preferred method of instantaneous interpersonal communication, so we needed to take a proactive approach to getting it all secured."

RPU's multient challenges should sound familiar to organizations that

have embraced IM. IT administrators would like to deploy a single system that talks to other IM systems using industry-standard protocols, as e-mail does, but that's not an option. More than 80% of IM use today is still through public networks such as AOL, MSN and Yahoo, and each uses proprietary protocols that don't allow users of one system to talk with users on another, according to analysts.

Increasingly, IT departments are addressing internal interoperability and management by deploying an enterprise IM platform and extending it to authorized users beyond the firewall using a secure log-in.

At Houston-based energy broker Amerex Group of Companies, for instance, staffers on the natural-gas side of the business use Yahoo to work with trading partners, while those on the electrical power side use AIM. Amerex deployed Yahoo Inc.'s Business Messenger to streamline internal communications for everyone and external communications for Yahoo users, but those established on AIM still need to use that service for trading.

"Even though we've brought in Yahoo Business Messenger, I can't force the guys using AOL to switch because they can't force their customers to switch. Once a particular IM client gets entrenched, it's hard to get it out," says Amerex CIO Brian Trudeau.

Competing Standards

Although vendor investments in the proprietary protocols that characterize consumer IM networks hinder interoperability, there has been significant movement toward setting standards. The protocols vying for standardization are the Extensible Messaging and

PRESENCE AWARENESS: IM'S KILLER APP

THE ABILITY to communicate instantaneously through IM is a boon to some businesses, but experts contend that the technology's "killer app" lies in its integration with enterprise applications and business processes. By extending the presence-awareness feature found in IM client hubs into portals and corporate directories, companies can realize true business-context communications.

"In IM communications, presence [in business applications] is where it's at, without a doubt," says Robert Mahowald, an analyst at market research firm IDC. He points to Microsoft's Live Communication Server and Office 2003 Applications in the company's suite as presence-aware, so users can initiate conferencing sessions to collaborate on documents. Enterprise IM vendors and others have raised prices to let developers IM-enable applications.

"With its presence capabilities, [IM] has the potential to humanize electronic transactions by bringing immediacy and intimacy to the process," says Wilson D'Souza, a vice president at Merrill Lynch. Not only can businesses leverage IM indicators within applications,

processes and workflows; they can also tie them into corporate directory profiles to see, for example, if it's better to contact someone's mobile device on a given day, he says.

According to Matt Bushman, an IT analyst at RPU, the utility expects to see significant productivity and collaboration benefits from the presence awareness enabled within its Office 2003 and SharePoint portal. "There's awareness in meeting and document workspaces, so people can meet in a workspace and work collaboratively, rather than just throw a document with read-only status onto the network," he says.

As companies increasingly look to leverage presence within business applications, the call for true interoperability among IM clients will get more deafening, says Michael Osterman, president of Osterman Research Inc. in Black Diamond, Wash.

"It all goes back to interoperability, particularly for businesses extending IM to customers," he says. "They don't want to have to support four different systems just to communicate with clients."

—Kym Gilhooley

Presence Protocol (XMPP) and the Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE).

XMPP is an open-source, XML-based standard developed by the Jabber Software Foundation that also serves as the underlying architecture for Denver-based Jabber Inc.'s Jabber XCP enterprise IM product. SIMPLE is an extension of SIP that's promoted by big-guns such as Microsoft and IBM. Earlier this year, the Internet Engineering Task Force approved the XMPP-Core and XMPP-IM specifications. The group is working on approval of SIMPLE.

"These standards are becoming more complementary, and both will see significant adoption. XMPP just got approval as a standard by the IETF, and that gives them a bit more running room and credibility," says Paul Ritter, an analyst at The Yankee Group in Boston. "But it's not a zero-sum game, and many companies are realizing that they need solutions that are SIMPLE-based as well as open-source standards-based solutions."

"The parties want the protocols they've invested in to be the leader in delivering more traffic than the other, but [XMPP and SIMPLE] are also com-

plementary," says Lisa Dussault, the IETF XMPP working group chairman. SIMPLE boasts strengths for clients that need to support a full suite of communications tools, such as video conferencing and whiteboarding, whereas XMPP has focused more on routing between processes as well as

How important are each of the following attributes in your selection of an IM system?

Ability to integrate with collaborative tools already in place

3.95

Ability to integrate with existing back-end applications

3.78

Vendor's support for SIP/SIMPLE standards

3.26

Vendor's support for XMPP standard

3.09

System is from same vendor that supplied corporate e-mail system

3.47

SOURCE: SURVEY OF 100 TECHNOLOGY DECISION-MAKERS
TECHWORLD INC. 40, 41 (CONDUCTED: MARCH 2004)

between computers, she says.

"A lot of headway has been made on the interoperability front in the last 18 months," says Wilson D'Souza, vice president of collaboration and directory services at New York-based Merrill Lynch & Co., a founding member of the Financial Services Instant Messaging Association (FIMA). "Client demand has pushed vendors to define and focus on a set of protocols."

FIMA was created to raise awareness of IM as a tool for financial services firms, which have been at the forefront of IM adoption. "FIMA isn't about what protocol we use. Our goal is interoperability, low-cost, high-quality products and a common way of provisioning services," says D'Souza.

Managing Diversity

In the absence of true interoperability, users are finding ways to manage the need for multiple services. Businesses committed to IM are concentrating on securing communications, meeting regulatory compliance for message logging and archiving, and managing user identities across a range of clients.

"Last year was a period of rapid growth of IM use in the enterprise, stemming from employees using consumer versions of MSN, AOL and Yahoo," says Ritter. "This year, IT managers are realizing that they need to take steps to manage and control that use of IM." To do so, some companies deploy agnostic IM infrastructure management systems from vendors such as Axiom Systems Inc., FaceTime Communications Inc. and IMlogic Inc. Such tools enable centralized management of IM traffic exchanged by multiple public clients.

Other companies go with an enterprise-class IM system and restrict access to public networks, allowing authorized external users only through a secure log-in. Still others do both, deploying an enterprise IM system for authenticated users and an infrastructure management system to handle use of public clients.

In addition to its internal use of Live Communication Server, which links employees through Active Directory, RPU has deployed Akamai's L7 Enterprise and Enforcer products to secure AIM and MSN use and manage user names. Concern about regulatory compliance primarily drove Thomas Weissel Partners LLC's decision to purchase IM Auditor from FaceTime in Foster City, Calif. San Francisco-based Thomas Weissel is a merchant banking firm; its salespeople use a mix of IM



clients to connect with institutional investors. IM Auditor logs all IM conversations and sends them to the company's supervision and archiving product, iLumin Software Services Inc.'s Assessor Enterprise, says Chief Technology Officer Rich Cannon.

"IM Auditor works like a proxy server, so every desktop that wants to make a connection to AOL, MSN or Yahoo has to go through that server. That way it can record all the conversations that go in and out," she says.

Washington-based law firm Shaw Pittman LLP, meanwhile, has avoided some of the control problems faced by other organizations because it deployed Lotus Instant Messenger before employees started downloading IM clients on an ad hoc basis.

"We've been using [Lotus IM] for more than three years, so we got to IM before many [public clients] were brought in," says CIO Nicole Minnick. She says the firm's 400 attorneys, located in Washington, New York, Los Angeles and London, quickly took to IM, as well as to the integrated document sharing, online meeting and whiteboarding features within Shaw Pittman's Lotus Notes and Domino applications.

Amerex's Trudeau says he's grateful that he has tools such as IMlogic's IM management products to control the use of public clients. But, like most IT executives, he just wants interoperability problems resolved so providers can focus on enhancing IM capabilities.

"People really need a standard for interoperable clients," he says. "The messaging itself has become a commodity. If [vendors] would focus on getting that infrastructure in place, they could look toward adding services." ■ 45614

Gilhooley is a freelance writer in Falmouth, Maine. You can reach her at kymg@maine.rr.com.

PRESENCE AWARENESS: IM'S KILLER APP

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Building a MODEL INFRASTRUCTURE

Capacity planning tools can forecast IT equipment needs with a high degree of accuracy, but it takes more than historical performance trending to do the job right. By Drew Robb

AFTER SEVERAL YEARS of making do with existing IT infrastructures, many companies are once again considering major purchases. But there's a huge difference between the buying process today and that of several years ago. "In the '90s, it was almost like having a free checkbook to just go out and buy what you need," says George Lewandowski, capacity planning supervisor at Metavante Corp., a Milwaukee-based company that sells IT products and services to financial institutions. "Organizations are finally starting to say that if they are going to spend money, they want to have a good ROI and TCO, not 50% utilization."

To achieve this, IT planners first must ensure that existing infrastructure elements are used to the fullest extent without lowering service levels. Then they must justify expenditures for new IT hardware by accurately predicting future needs.

Capacity planning processes and tools are essential for accurate planning. Lewandowski uses TeamQuest Corp.'s TeamQuest Model software to plan capacity needs for about 1,000 Windows and Unix servers. By using a mix of trending analysis and modeling to properly assign resources to tasks, he says he has driven server utilization up without affecting service-level agreements. "With proper capacity planning we can drive utilization into the 80% to 90% range and really start getting our money's worth out of the equipment," Lewandowski says. The tools available can produce very accurate results, he says, "provided you use them in a scientific manner."

Formula for Excess

Capacity planning is more than an application. Successful projects require a combination of skills, organizational

processes and tools in order to ensure that a company has enough infrastructure to meet projected needs without overspending. Yet many planners take a more cautious route, buying excess capacity in order to ensure that there is never a shortage. "Most organizations use the formula CP + BMH: capacity planning equals 'buy more hardware,'" says Milind Govilkar, an analyst at Gartner Inc. "True capacity planning is a process that requires a high level of IT maturity."

Capacity planning starts with performance monitoring tools, since it's impossible to tell how much capacity you need without knowing how much you already have and how it's used. In the simplest projects, planners take basic performance data and graph the

CAPACITY PLANNING TOOLS

trends. Administrators view the growth in usage rates, estimate where existing capacity will run out and schedule hardware purchases to meet demand.

Almost any performance monitoring software can do this. But many packages that tout capacity planning capabilities don't do much more than track historical performance, and a performance trend isn't the best indicator of future requirements — though in some cases it may be all you need, analysts say. "Trending... doesn't work as well as most of its proponents imagine. However, it does enable reasonably accurate quick-and-dirty analyses to take place, with a good return on investment for this work," says Andy Bolton, CEO of Capacitas Ltd., a London-based capacity planning consultancy.

More advanced capacity planning software does more than track historical trends. It also lets IT planners create analytic models of different parts of the infrastructure to see how changes in hardware, applications or users will affect performance levels.

"If the project that is under way has a

large impact, or large potential impact, it is essential to use modeling, since that will give you the best insights," says Glenn O'Donnell, an analyst at Meta Group Inc. in Stamford, Conn. But he adds, "for minor projects, it is best to use trending, since it is too time-consuming to model everything."

Either way, analysts say the use of capacity planning tools is growing and taking on greater importance in IT operations. A recent Meta Group study of critical management issues put capacity management and planning at the top of the list for large enterprises.

But while the use of these tools is increasing, administrators aren't necessarily using them to predict future needs. Mike Ehr, research director at Enterprise Management Associates Inc. in Boulder, Colo., says organizations often use the tools to solve current problems connected with server consolidation and overprovisioning.

A Different Model

Capacity planning tools that perform modeling rather than just trending fall into three major categories. Mainframe-based tools come from traditional mainframe management vendors. Examples include Patrol Performance & Predict from Houston-based BMC Software Inc. and MXG from Merrill Consultants in Dallas.

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In the server-based tools arena, the leading stand-alone vendor is Clear Lake, Iowa-based TeamQuest, but server management tools from vendors such as BMC and SAS Institute Inc. in Cary, N.C., also include server modeling features.

Network-based tools, such as those from Opnet Technologies Inc. in Bethesda, Md., focus on network planning. In addition, enterprise network management suites from Hewlett-Packard Co., Computer Associates International Inc. and IBM also include network capacity planning.

The tools in these categories overlap functionally, but generally each of the products performs best in its niche and offers lesser capabilities in the others. As a result, companies tend to use different tools for different parts of their infrastructures.

Boris Gdalevich, capacity planning manager at Quest Diagnostics Inc., a

medical testing and diagnostics firm in Teterboro, N.J., uses BMC's Perform & Predict to model his servers while the network operations staff uses different tools. Sprint Corp. uses TeamQuest to model its midrange servers and PerfMan software from Bellicheim, Pa.-based The Information Systems Manager Inc. (IMS) to model the CPUs on its IBM z900 series mainframes.

Although using a single planning tool throughout the enterprise is desirable, analysts say it's best to use different tools for different areas because of the limitations of today's tools. Most companies have separate teams managing mainframes, servers and the network anyway, so each team should pick the tool that best suits its needs. Eventually, however, as companies move toward more dynamic, on-demand computing environments, everything will need to be modeled together.

"When enabled with automated provisioning and service-level management tools that detect changing needs and share the load on the fly, businesses should be able to reduce overall capital investment," says Mary Johnston Turner, vice president for enterprise strategies at Boston consulting firm Summit Strategies Inc. "I expect that in the future, capacity planning will be considered more a part of dynamic infrastructure provisioning and configuration/change management than as a stand-alone, application-specific activity."

Capacity planning tools are useful only if they produce accurate predictions. Fortunately, the tools are becoming more accurate. When Metracene ran one set of simulations using TeamQuest, the software predicted that the company would reach 80% utilization within two months. The actual number turned out to be 85%. The model also predicted that installing specified hardware would drop utilization to 65%. When Metracene put in that hardware and checked the actual utilization, the result was 66%. "We were very, very close," says Lewandowski.

Joel Allen, senior capacity planning manager at Sprint, says that the mainframe CPU models he has created using IMS's PerfMan have all yielded predictions that have come within 10% of the actual performance figures. Nevertheless, Allen says, "capacity planning is definitely more of an art than a science."

One reason is that accurate forecasts depend on getting people from different business units to give accurate and timely data on their future needs. Unlike trending, which makes predictions

Five Questions to Ask

1 Does it model all the elements you need?

2 Does it pull information from all the management software you currently use, or do you still have to buy the capacity planning software vendor's performance monitoring module?

3 Does it work best with other hardware and software products from a particular vendor or is it truly vendor-agnostic?

4 Does it auto-discover the elements on your network and input their parameters into the model, or do you have to do this manually?

5 How much online collaboration is possible?

by reviewing historical performance data, modeling requires getting sales forecasts and other predictions from other parts of the organization and adding it to the model. It won't do the company any good to launch a big advertising campaign for its online services without having the bandwidth and server capacity to handle the projected increase in customers.

Jean-Pierre Garbani, an analyst at Forrester Research Inc. in Cambridge, Mass., agrees that capacity planning is "still a black art in many senses." No matter how sophisticated the analytics in the tools, the user still needs to have a thorough understanding of what parameters to model and then must interpret the data and ensure that it makes sense. Still, he doesn't advise trying to do sophisticated planning without using automated tools.

"If you are doing server consolidation or upgrading your operating system, even if you are very astute and skilled, you still need tools," he says. "Doing it by hand won't work." **EW4796**

Robb is a freelance writer based in Los Angeles. You can reach him at drowebb@abcflo.net.

Predicting Disaster

FOR MIKE KENNEDY, the value of a capacity planning tool lies in its ability to predict the effect of a discrete event on future needs. Kennedy, vice president of the infrastructure performance management group at J.P. Morgan Chase & Co.'s data center in Hicksville, N.Y., faced such an event when his company acquired a credit card portfolio from San Francisco-based Provident Financial Corp. in 2002.

Kennedy is in charge of anticipating capacity on the company's Cisco-based network, its call center system and some 1,000 midrange Unix/Windows/S400 servers. He uses Opnet's IT Guru suite, which pulls data from Cisco-Works, HP OpenView, Mercury Interactive Corp.'s SiteScope and other management tools. The IT Guru software stores performance and configuration data in a virtual network environment so simulations can be run with-

out re-creating the data each time.

Kennedy put IT Guru to work modeling what would happen when an additional 3.5 million Provident credit card customers were suddenly dumped into J.P. Morgan's call center and production environment. Some effects were obvious, others were not. For example, the trouble leading to the voice-recognition units were inadequate to handle the increased traffic, and J.P. Morgan was able to avert a disaster before the Provident customers came online.

"If we didn't do that modeling, we would have had an outage. It would have cost us \$1.2 million per day in losses," he says.

Kennedy now models all changes before they go into production. "Eliminating problems before they happen has a tremendous influence on the bottom line," he says.

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Robb is a freelance writer based in Los Angeles. You can reach him at drewrob@sigbblog.net.

BY MICHAEL KAY

NOW ADVANCED MICRO DEVICES use 32-bit processors (such as the Intel Pentium) running 32-bit operating systems (such as Windows XP, Mac OS, Unix or Linux). Some years back, desktop computers used 16-bit microprocessors (such as the Zilog Z80), then came 30-bit chips (the Intel 8086 and Motorola 68000). The next step in this evolution is the 64-bit CPU.

Who's Doing What?

Intel has been the microprocessor industry's 800-pound gorilla from the beginning. The company began 64-bit development in 1991, and the first systems with its 64-bit Itanium CPUs shipped in 2001. Unfortunately, Intel developers early on opted for an architecture that's completely different from the common x86 (also known as IA-32) standard. The resulting platform has to resort to an inefficient emulation mode to run 32-bit applications.

The industry-leading vendor had stunningly misread what the market wanted, and the lack of true 32-bit compatibility caused the Itanium to languish. Approximately 5.3 million servers were shipped worldwide in 2003, and of those, 467 million (8%) had the 32-bit x86 architecture, according to analyst Mark Melanovsky at research firm IDC. Itanium CPUs were in just 10,000 servers.

A breakthrough came in April 2003, when Advanced

64-Bit CPUs

DEFINITION

A 64-bit microprocessor can process data and instructions in chunks of 64 bits during a single clock cycle, giving it the potential to address far more memory and handle more processes simultaneously than a CPU that processes only 32 bits at a time.

Micro Devices Inc. in Sunnyvale, Calif., introduced its AMD64 platform and the Opteron series of 64-bit server CPUs. Unlike the Itanium, the Opteron chips could run 32-bit applications quickly and efficiently in addition to handling new 64-bit instructions. AMD's move led to faster, more cost-effective servers that didn't need to wait for the development of 64-bit applications.

AMD followed up the Opteron in September by announcing the Athlon 64 processor family for desktops and mobile computing. In 2003,

some 35,000 Opteron-based servers (almost all of them dual processors) were sold—nearly double the number of Itanium systems.

In response, Intel announced in February that

within a few months it would ship new versions of its Xeon server CPUs (code-named Nocona and Prescott) that could handle 64-bit applications and operating systems. The new capability is being called Intel Extended Memory 64 Technology.

Analysts note, however, that the new Xeon aren't expected to offer the integrated mem-

ory controllers or HyperTransport links to chip-to-chip interconnect technology that operates at memory speed(s) of AMD64 chips. Intel's new CPUs are expected to be compatible with AMD's 64-bit instructions.

Why 64 Bits?

There are two major reasons why you might want to use a 64-bit CPU. One is the ability to use massive amounts of memory. Using data in high-speed, solid-state memory is significantly faster than getting it from disk, but there are limits to how much a machine can store in RAM. Running on a 32-bit processor, for example, Windows 2003 Server can handle a maximum of 3GB of RAM, and even Unix systems top out at 4GB. The AMD64 platform can address 4 terabytes of physical memory, and a 64-bit CPU can potentially address up to 18 exabytes.

The second advantage of the 64-bit chip is its ability to handle larger floating-point numbers, which are often used in scientific and engineering calculations. While 32-bit processors can only handle floating-point calculations with values up to 2³¹ (approximately 4.29 billion) unless they resort to software emulation, 64-bit chips can directly use numbers up to 2⁶³ (about 9.22 quintillion billion).

Seattle-based Cray Inc. is building a massively parallel processing supercomputer, nicknamed Thor's Hammer, for weapons research by the National Nuclear Security Administration at the Sandia National Laboratory in Albuquerque. The \$90 million ma-

chine, scheduled for installation this summer, will use 10,240 clustered Opteron CPUs along with 240TB of disk storage and 80TB of high-speed RAM inside its 108 compute node cabinets.

Although a 64-bit CPU can handle twice as much information at a time as a 32-bit CPU can, it won't be twice as fast—programs won't start in half the time, for example. As an end user, you wouldn't notice a difference in speed most of the time. The difference comes into play with harder-working servers that may have to deal with hundreds or thousands of users, storage areas and process streams simultaneously. In such cases, using CPUs with bigger pipes may mean you need fewer servers overall. That translates into added long-term efficiency.

Other 64-Bit CPUs

There are many other 64-bit CPUs. For example, 64-bit Reduced Instruction Set Computing (RISC) CPUs include the UltraSparc family from Sun Microsystems Inc. and, most recently, the IBM PowerPC 970 (which Apple Computer Inc. calls the G5). Others include Hewlett-Packard Co.'s PA-RISC family; processors developed by MIPS Technologies Inc. and its licensees—including Toshiba Corp., Silicon Graphics Inc. and Digital Equipment Corp. (now part of HP), which pioneered the now-abandoned Alpha architecture. In 2003, Melanovsky says, servers using those processors accounted for 9.8% of the server market. **■** 45804

Kay is a Computerworld contributing writer in Worcester, Mass. You can contact him at rutsky@charter.net.

QUICK & STUDY

A Look at Six Microprocessors

| | Primary use | Maximum clock speed | Maximum RAM supported | Run native 32-bit apps? | Level 1 cache | Level 2 cache | Level 3 cache | Internal bandwidth |
|------------------------|-----------------------|---------------------|-----------------------|-------------------------|---------------|---------------|---------------|--------------------|
| Intel Itanium 2 | Servers | 1.5 GHz | 64GB | No | 32KB | 2048KB | 6MB | 8.4GB/sec. |
| Intel Xeon MP (32 bit) | Servers | 3 GHz | 4GB | Yes | 8KB | 512KB | 4MB | 4.8GB/sec. |
| AMD Opteron | Servers | 2.2 GHz | 66B | Yes | 128KB | 1MB | None | Not available |
| AMD Athlon 64 FX | Desktops | 2.4 GHz | 8GB | Yes | 128KB | 1MB | None | 6.4GB/sec. |
| Sun UltraSPARC III | Servers | 1.2 GHz | 8TB | No | 96KB | 8MB | None | 2.8GB/sec. |
| IBM PowerPC 970 FX | Servers, workstations | 2 GHz | 8GB | Yes | 96KB | 512KB | None | Not available |

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Building a Defense Against Complaints

Dealing with complaints from the public can be a stickier situation than any virus attack. By Vince Tuesday

ID LIKE TO THINK that I have a clearly defined role focused around protecting the information assets of my organization. In reality, I also have the delightful job of dealing with whatever else people decide to send my team's way. If I can't think of a better home for it, then we have to mop it up.

This week, we received a complaint from a member of the public. My role as an external-facing part of the company is normally limited. I might get to talk to some auditors and vendors, but that's about it. Even the regulators are all funneled through the compliance department, so on the rare occasion when I'm wheeled out in front of them, I'm accompanied by a compliance handler who keeps me on a short leash.

The complaint came first to the e-mail team, which swiftly passed the buck to the Web support team. That team had the complaint for a day or so before deciding to pass it on to me. The complaining party was a member of an e-mail discussion group about growing red bulls. He had provided examples of e-mails from a Hotmail address that he claimed were inappropriate and offensive, and we wanted my company to stop them.

My organization is fairly large, and sometimes remote corners of it take over things without my group hearing about it. But I was pretty sure that we hadn't diversified from financial services to plant advice and that we had not recently acquired Hotmail.

Unfortunately, the complainant had a grudge and an ounce of technical sense. Tucked away in the headers on every Hotmail message is the IP address of the machine that connected to Hotmail and sent the e-mail. This IP address had been tracked back to the address range registered to my company.

The e-mails didn't look that bad. The complainant had posted some obviously off-topic content about the presidential race, and the person connecting from my company had told him to "get a life and stop bothering us."

Given the mild nature of the offending responses, I was almost tempted to send a formal response from my company telling the complainant to "get a life and stop bothering us," but I know that the 10 seconds of pleasure I'd get would be far outweighed by the pain and hassle that would cause.

Since he came to us, I can only assume that the complainant had been given the brushoff or runaround by the discussion group owners and the Hotmail abuse team. I sup-

pose we were his last hope, but the fact that he hadn't given up set alarm bells ringing.

I've had problems before with online stalkers targeting people in my company, so I wanted to handle this one by the book in case it got smelly later. I sent copies of the complaint to corporate communications and to the legal department asking them to draft a response.

The simplest thing to do would be to ignore the complaint, but I got the impression that this moaner wouldn't let it rest. No doubt, the complainant would keep flowing up the executive chain until he reached someone who would decide that something had to be done about it. Trivial letters to the chairman do tend to get a response, sad though it is to admit.

Precautionary Action

I'm in a bind about what to advise the corporate communications team to include in its reply. If we say we're starting an investigation, the complainant will no doubt want to know the results, which we would never release outside our company. But if we don't answer, that'll look bad, too. Any other kind of brushoff, such as sending him to complain to Hotmail, would come back to haunt us if this gets to the press later. We'd look like we didn't care, which of course we don't, but we have to be seen as caring.

The paranoia around our reputation and the potential of bad press limits our freedom to make common-sense responses and sucks enormous amounts of staff time. I suppose that's why people who feel insulted or hurt raise these complaints: They know the lumbering response they

provoke from organizations is likely to end with their adversaries getting squashed.

Perhaps this is a hint of things to come and my company should ban all Webmail-type services at our firewall. But should the mazy lose the benefits of this kind of service just because of the complaints of the few who might be offended at some point? Would it be worse if Webmail was banned and our staff member had used a company account to send responses? I'll try to keep injecting a sense of proportion into our investigations and response.

Perhaps the trail from discussion group to Hotmail to us is too long for the mainstream press to understand or care about and we're overreacting to the chance of bad press. We'll have to wait and see.

Smarter Viruses

Meanwhile, I've also been keeping my day job going. We've been activated by wave after wave of ever more clever viruses. Nothing has made it past the edge yet, but they keep on coming.

The latest Bagel worm was hidden within an encrypted zip file so most virus scanners couldn't open the file to check its contents. You'd think the encryption would also stop end users from opening the infected content, but the virus writer helpfully included the password for the zip file in the e-mail message.

The antivirus vendors responded by trying each word in an e-mail as a password to open and examine the zip file. So the next Bagel variant included the password as a picture rather than text to foil our scanners.

The battle goes on, but so far our fortress remains unbroken. ■

WHAT DO YOU THINK?

The week's parable is written by a real security investigator, "Vince Tuesday," whose name and employer have been disguised for obvious reasons. Contact him at vince.tuesday@computerworld.com, or join the discussion at my forum. (Search for #21592)

To find a complete archive of our Security Manager's Journal, go online to computerworld.com/journal

SECURITY LOG

Security Bookshelf

The Effective Incident Response Team, by Julie Loren and Jeffrey Meador, Addison-Wesley, 2003.

Whatever else your company is or however much effort you put into information security, you'll have security incidents. If you want to keep your costs in line or reputation from those incidents under control, then you need a well-oiled incident-response plan and a skilled team to carry it out. This book will help you assemble both from scratch.

The authors take readers on a speedy tour of the key subjects, from defining what an incident-response team is and what it should do to the depths of the law and computer forensics. This book is an accessible and interesting read and is a perfect guide for additional managers who need to develop or learn security teams or assess the abilities of an outsource team.

—Vince Tuesday

Trend Micro Adds Quarantine Feature

Trend Micro Inc. in Cupertino, Calif., has added an end-user quarantine feature to its ScanMail SecureMail software. The add-on, free to existing users, places suspicious e-mails in a separate Exchange folder. Users can then review messages, approve legitimate ones and instruct their own approved-number lists.

MCI Offers SSL VPN

MCI has introduced Secure Desktop Layer Virtual Private Networks services to its desktop network services platform, called Access Manager, and its administrative platform for the Access Manager services, called Enterprise Services Manager. The SSL VPN is based on technology from Aventel Corp. in Seattle.



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BRIEFS

Siebel App Targets Pharmaceuticals

CRM software maker Siebel Systems Inc. in San Mateo, Calif., is shipping a new analytical application for salespeople in the pharmaceutical industry. Siebel Pharma Field Analytics is designed to let mobile users access and manipulate complex information about prospects. Pricing wasn't disclosed.

Vendor Rolls Out Network Analyzer

This week, Network Associates Inc. will announce Netnalyzer network analyzer software for 10/100 LANs in small and midsize businesses. The software runs on Windows XP and is available in a standard version, called Netnalyzer D, and an expert version, Netnalyzer DX. Both support remote troubleshooting and continual monitoring. Netnalyzer D and Netnalyzer DX are priced at \$1,095 and \$4,995, respectively.

Genalytics Offers Analytics Upgrade

Genalytics Inc. last week announced the latest version of its analytics platform, Genalytics 5, which offers better performance than previous versions, enables analysts to do advanced data extraction without specialized SQL or IT skills, the business intelligence software maker said. The product is shipping now; pricing starts "in the low six figures" for 10 seats, according to Newburyport, Mass.-based Genalytics.

Aruba App Protects Wireless VoIP Calls

Aruba Wireless Networks Inc. in San Jose last week unveiled Secure Voice, an application designed to protect voice-over-IP calls on wireless LANs. Secure Voice runs on a company's WLAN controllers and relies on key features of the switch operating system to identify and authenticate voice traffic, according to Aruba.

NICHOLAS PETRELEY

Playing IT Jeopardy

WE TAKE YOU TO THE STUDIOS OF America's favorite game show, the only kind of jeopardy that even an IT security manager can like.

Alex: Welcome to *IT Jeopardy*,

I'm Alex Quebec, that's pronounced "Ahl-lex Keh-bek" the host of our show. Tonight's categories are "Market-

ing Madness," "Numbers" and "More or Less." Our contestants are Hank, Trish and Sophie. Hank, why don't you start us off by choosing a category.

Hank: I'll take "Marketing Madness" for \$300, Mr. Quebec.

Alex: That's Quebec. And the answer is, "Like comparing apples to malaria." (Trish buzzes first.)

Trish: What is comparing the cost of Linux on a mainframe to the cost of Windows on a PC?

Alex: That's correct. And Trish takes the lead with \$500 and with it the right to choose the next item.

Trish: I'll take "More or Less" for \$100, Alexandra.

Alex: That's Alex, Trish. And the answer is, "Former President Bill Clinton's opinion on marital fidelity."

Hank: (Shouting.) What is more credible than SCO's claims in its lawsuits?

Alex: Right. And Hank is on the board with \$100. Your choice, Hank.

Hank: I'll take "More or Less" for \$400, Mr. Kabark.

Alex: Quebec. And the answer is, "A midnight stroll alone through New York's Central Park."

(No one answers.)

Alex: Five seconds. Trish: What is less risky than using Microsoft Outlook?

Alex: Judges? No, I'm sorry. You were close, though, Trish. What we were looking for was "Microsoft software," not "Outlook" specifically. You still control the board, Hank.

Hank: "Numbers" for \$300, Alex.



Alex: It's Alex. And the answer is, "Aside from the bottom line, these are the most important numbers to a U.S. IT organization."

Hank: What's total cost of ownership?

Alex: No, I'm sorry. Anyone else?

Sophie: What is the international dialing code for India?

Alex: That's correct, Sophie, and you're on the board with \$300. It's

Sophie's choice now.

Sophie: I'll take "More or Less" for \$300, Mr. Kabark.

Alex: It's Quebec, Sophie. And the answer is, "The Loch Ness monster."

Sophie: What is easier to find than Microsoft innovation?

Alex: Right. And that puts Sophie in the lead with \$600. Your choice again, Sophie.

Sophie: "More or Less" for \$500. (Bell rings; lights flash.)

Alex: Congratulations, Sophie, you found the Daily Double. You have \$600; how much would you like to wager?

Sophie: Let's see, I'll make it a true Daily Double.

Alex: OK. For \$600, Sophie, what does this picture represent?

(A picture of a blank sheet of paper is shown.)

Sophie: (Hesitating.) What is a complete listing of the source code owned by SCO that was illegally incorporated into Linux?

Alex: That's absolutely correct, and Sophie takes a commanding lead with \$1,200. Sophie, it's still your choice.

Sophie: I'll take "Marketing Madness" for \$300 please, Alex.

Alex: Alex. And the answer is, "We were planning to switch to open-source software."

Hank: What do you tell Microsoft when you want a deep discount on their software?

Alex: That's correct, Hank, and it brings you to \$100, tying you with Trish. Hank, you pick the category.

Hank: Thanks, I'll take "Marketing Madness" for \$100.

Alex: OK. The answer is, "\$2 billion."

Trish: What is the list price on Scott McNealy?

Alex: That's what we were looking for, and now you're all alone in second place with \$200.

(Bell rings.)

Alex: That means our time is up and it's time for Final Jeopardy. Today's category is "E-mail." And the answer is, "What the contents of your in-box indicate you need to do most."

(Theme music plays while contestants write their answers. Music ends; contestants put down their pens.)

Alex: We'll start with you, Hank. Let's see your response. Hank says what your in-box indicates you need to do most is "lose 20 pounds in one week without drugs or dieting." I'm sorry, Hank, that is not correct, and even if it were, you didn't put your response in the form of a question. You had \$100 and wagered it all, so that brings your total to zero.

That takes us to Trish, whose answer is, "What is buy cheap Xanax and Sildenafil/Citrate?" Excellent guess, but it's incorrect. Trish also wagered it all, so she, too, ends up with nothing.

Let's move on to Sophie. The answer was, "What the contents of your in-box indicate you need to do most," and she wrote, "What is a better spam filter?" That's correct. And Sophie is our new IT Jeopardy champion.

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Q&A Bringing the Market Inside

MIT professor Thomas Malone says that the same laws of supply and demand that fuel world economies can work within a company to staff projects, share information and even schedule manufacturing. **Page 37**

Career Watch

This week, we look at building your IT résumé by working at a nonprofit organization, the good news for IT security professionals and the salary boost provided by having a government security clearance. **Page 38**

OPINION

It's Time for a Risk/Reward System

Sharing the risk on a contract benefits the IT customer and the vendor, says Bart Perkins. Here's how shared risk contracts work. **Page 39**

War stories – and lessons learned – from IT leaders faced with products that didn't work as advertised.

BY THOMAS
HOFFMAN

YOUR ORGANIZATION has invested thousands, maybe millions, of dollars trying to install a vendor's product to give your Web site more capacity or optimize your supply chain, and it just doesn't work as expected. Now what? Senior management wants to know where the money went. End users want to string you up. You'd like to sneak out of Dodge, but you can't.

Here are the tales of six IT leaders who had to deal with underperforming projects and took decisive actions to clean up the mess.

Grounded

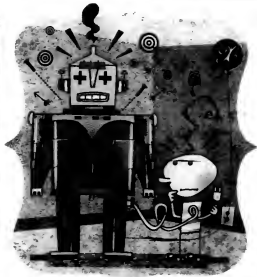
Four years ago, the U.S. Air Force tried to replace a 25-year-old aircraft maintenance tracking system with one that had mobile terminals and Unix-based off-the-shelf software that it expected to begin piloting within 12 months.

But after two years and heavy customization of the commercial package, "we realized it just wasn't going to happen," says Air Force CIO John Gilligan.

The Air Force tracks many of the parts used in its aircraft by their serial numbers, and the third-party software it was trying to deploy "couldn't do the kind of serial-number tracking we needed," Gilligan says.

In addition, he says, the software

ILLUSTRATION BY [unreadable]



"wasn't mature enough" to handle the Air Force's stringent quality-assurance sign-offs on aircraft maintenance.

In hindsight, Gilligan says the Air Force was partly to blame for what became a \$200 million failure – a price tag that includes software licensing and consulting fees and the cost of hardware and internal labor. He says that the Air Force did a poor job of governing the project and that critical decision-making during the project occurred on "too low a level."

"It was kind of a slippery slope, and we were so far down that it became very difficult to walk back up," says Gilligan.

When the agency decided to cancel the project, end users "were doubly unhappy," says Gilligan. Not only would the system not be delivered, but the Air Force also froze any upgrades to the mainframe system for four years

to help free up capital for the modernized system.

So Gilligan and the Air Force team addressed some short-term requirements to improve the end-user experience. Two years ago, the agency developed a browser-based front end to make it easier for maintenance crews to access the legacy system from its 100-plus worldwide bases.

The project team also began collapsing dozens of databases into a single repository. Then the group began to implement middleware tools and portal interfaces to make it easier for top brass to pull maintenance information out of the system.

Cutting the cord with the vendor behind the project wasn't too difficult, says Gilligan, since the contract had various milestones that had to be met or the effort would stop. And while the vendor

Pulling THE Plug

WEATHERING A STORM

Sometimes a commercial product works fine until it's required to perform on a much larger scale.

In 2000, The Weather Channel Interactive Inc. began using IBM's WebSphere application server to support its Web site. Weather.com: The system runs on Linux and allows Weather.com to dynamically build weather pages for more than 90,000 cities worldwide. Mark Ryan, formerly the chief technology officer at The Weather Channel, says he was pleased with the performance of the application server at the time.

But scalability became a big problem starting on Jan. 3, 2002, when site traffic spiked to 18 million page views.

"Whenever we had a severe winter storm, we either had very slow response times or unavailability and complaints from our visitors, which was unacceptable," says Dan Agronow, now vice president of technology.

On top of that, IBM handed the Atlanta-based network a maintenance bill "that was outrageous," he says. When Agronow complained, The Weather Channel's IBM account manager responded by saying that IBM was the only vendor that could support such a



Dan Agronow: "I guess I was a little too trusting."

big Linux environment, thus making it impractical for Weather.com to migrate to another platform. "It's almost like they challenged us," he says.

Agronow had evaluated an open-source application server called Tomcat, and he told The Weather Channel's executive team that migrating to Tomcat would solve its Web site capacity problems.

"I had pressure from our CEO that we had to fix this and we had to do this permanently," says Agronow. "While we understand the customer's issues and worked closely with them to remedy the situation, this was one of the first generations of these new technologies. It's atypical of the positive experience, especially with scalability, that less than thousands of WebSphere customers have had," says IBM spokesman Steven Costantini.

Since the Tomcat migration was completed in June 2002, Weather.com has been able to scale to more than 55 million page views per day when big winter storms or hurricanes drive usage spikes, according to Agronow.

If he ever encounters a similar situation, Agronow says, "I would like to see proof from the vendor that their solution can perform at the capacity level we needed, even if it's in the lab. [I guess it was a little too trusting]"

—Thomas Hoffman

"realized they would get a black mark" for not having completed the project, "on some level, they were just as unhappy" with the Air Force's inability to re-engineer its internal processes, Gilligan says.

Now that the commercial market for maintenance systems has matured a bit and the life of the legacy system has been stretched out, Gilligan says his group will begin evaluating other third-party packages within the next year, including ERP systems that would include components such as supply chain management, maintenance and procurement functionality.

Less Than Hospitable

At Mandalay Resort Group, marketing managers "were livid" about an effort to integrate two marketing applications, a project that ran two years late and 25% to 30% over budget, says CIO Tracy Austin. The marketing data warehouse encountered systems throughput and uptime problems related to the hardware, business intelligence software and the operating system that were selected, says Austin.

Part of the problem, she says, was that the Las Vegas-based hospitality and gaming company had failed to set any performance parameters to measure at regular intervals whether the project was meeting business and technical requirements.

Austin, who joined the company as CIO in early 2003, when the project was at its midpoint, took immediate steps to salvage the seven-figure effort. With no contingency plan in place,

Austin went to senior executives in the company and explained the situation to gain additional funding for new hardware and software. She made sure the contracts with the new vendors included financial penalties if systems availability and throughput thresholds weren't met.

Mandalay then installed a new operating system and hardware platform within two months. Once that "healed the bleeding," the project team installed new business intelligence tools six months later, Austin says.

Because the previous system had been in place for nearly two years and was being used by Mandalay's marketing team, says Austin, "there was no way to recoup any significant portion of the investment." But it did help boost her staff the value of establishing

strict prototype and design reviews, and building performance metrics into the contract.

Authorizing Success

In mid-1998, MasterCard International Inc. began looking for a client/server authorization system for its merchant customers as part of a five-year, \$800 million IT upgrade. But 18 months into what was supposed to be a one-year effort, the Purchase, N.Y.-based company realized that the number of lines of code it had co-written with the vendor had doubled and that the system still had big problems porting between HP-UX and Sun Solaris.

"There was a lot more vaporware than there software," says Robert Reeg, senior vice president of systems. Fortunately, MasterCard had built termination clauses into the contract as well as intellectual property protection. As a result, the credit card issuer was able to obtain full ownership of all the software it co-wrote with the vendor and free licensing rights to the base software code. MasterCard finished developing the software itself and put it into production in 2000.

Although that piece of the company's five-year systems enhancement effort ran about 25% over budget, the overall project was completed on time and just 3.7% over budget, Reeg says.

Reeg says he learned a few lessons from the experience, including the importance of running a vendor's software through a third-party lab to ensure that it meets performance requirements. And "having a good

lawyer working with you" to help define clear clauses and intellectual property rights in the contract doesn't hurt either, he adds.

Remembered

Sometimes, pulling the plug on a project can be a blessing for everyone involved. When Juniper Networks Inc. was about six months into developing a browser-based, self-service customer system in late 2002, IT staffers and customer service managers realized that the system they had licensed just wasn't meeting the company's needs, says CIO Kim Perdikou.

The business-unit leader agreed, so Perdikou negotiated a contract termination with the vendor and had internal staffers develop the desired functionality in-house.

"The biggest thing was the relief people felt when... we tried to do something totally different," she says. "People were stressed about this thing not working properly."

The Sunnyvale, Calif.-based router maker had a 90-day limit on all projects, but the standard wasn't enforced as strictly then as it is now, says Perdikou. The project ended up running 90 days longer than expected and 50% over budget.

But the biggest takeaway, says Perdikou, was learning to admit openly to end users that the system wasn't working properly and to tackle the problem head-on. "The expectation of IT delivering what you need today is so low that users give up and build what they want or live with things that are semibest," she says. "We should work with people to get things done right."

Having a solid contingency plan can also ease end-user tensions. When Philadelphia-based Lincoln Financial Group tried to install an enterprise single sign-on customer identification system for its external Web sites in late 2003, the product couldn't perform the kind of distributed administration that the IT department or end users had anticipated, says Jason Glazier, Lincoln's chief technology officer.

So Glazier had the project team take on the vendor's product, and Lincoln developed its own identification system using Microsoft's SQL Server. That helped the project team meet its original delivery target of January 2004.

And although the project sponsor was dismayed that the original product didn't work as expected and probably cost an extra \$50,000 to \$100,000, having a bona fide backup plan "made it a much less awkward" situation, Glazier says. **45817**

Project Pointers

Don't accept a vendor's product at face value, even if it's already used by your company for different purposes.

Build contingency planning and risk management into the project from the outset.

Don't hang project success completely on a vendor. Recognize what steps need to be taken internally—including business process changes.

Test products in a laboratory setting before signing off on funding.

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certified to work in all kinds of multi-vendor multi-technology networks. So whatever shape your network's in, we'll take care of you the whole way. And we promise it won't hurt a bit. Visit us at avaya.com/doctor or call 866-GO AVAYA.

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Contact Centers

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gets checked every 3,000 miles.

YOUR ENTIRE NETWORK

gets checked all day, every day

by Avaya Global Services.

WHEN BILL HAGERUP was a novice project manager, he attended a meeting in which managers were picking people for upcoming projects. He let the other project managers step all over him and ended up with the leftovers. "The project didn't go well, and I would never let that happen again," he says.

Next time, he was prepared. Well before the meeting, Hagerup approached each of the top-skilled people and sold them on the project, so their bosses agreed to let them go. "I got all the people I wanted," he says. "And it turned out to be a terrible project."

He had picked people for their technical skills and ended up with a team of prima donnas. "They couldn't work together," explains Hagerup, who is now a project management specialist at Ouellette & Associates Inc., a consulting firm in Bedford, N.H.

A great project team requires more than technical skills. It takes the right mix of "soft" skills, personalities and attitudes to get and achieve results. Here are some tips from project managers about whom you need on your team and how to get them.

FEWER IS BETTER

After the fifth member, a project team's effectiveness is inversely proportional to its mass, says Catherine Tomczak, a project manager at First Data Corp. in Greenwood Village, Colo. But affected departments often want representatives on a team regardless of whether they have any value to add. The result is bloated teams with uneven skills, knowledge and commitment levels, and getting them on the same page wastes time and energy, Tomczak says.

Her best teams have had only four people. Each person understood the project's direction and his role, and they all pulled together. This type of team can work two to three times faster than an over-stuffed one, Tomczak estimates.

ATTITUDE COUNTS

Look for people with positive attitudes and behaviors, says Sue Young, CEO of ANIMA Consulting, a project management consulting firm in Willsboro, Vt. People with a good work ethic who are upbeat, respectful of others and continually learning will help lift the team's spirit, she says. Conversely, one cynic can spoil the entire team's outlook.

If you have to choose between specific skills and attitude, go for attitude. "Experience is very important," says Jeff Anderson, a project manager at First Data, "but I can override experience for a person with a strong work ethic that I can count on."



HOW TO PICK A PROJECT TEAM

Tech skills are only
the beginning.
By Kathleen Melymuka

DIVERSITY LOWERS RISK

"The riskier the project, the more diversity you need in the team," says Johanna Rothman, president of Rothman Consulting Group Inc. in Arlington, Mass., and co-author of *Hiring Technical People* (Dorset House, 2004). IT tends to attract similar types of people, and that's something you need to counteract.

For example, people who want to bring quick closure to decisions are overrepresented in IT, she says. That can be a danger because their desire for closure can lead them to focus on a strategy before considering the alternatives. "They come up with the first idea, and that's it," she explains. "You get 'group-think' much more easily." Adding someone who likes to examine many options can make a big difference, she says.

FAMILIARITY BREEDS ACTION

It's helpful if team members have worked together before, Tomczak says. "Everybody has his or her own communication style and approach, and if you don't have any of that background walking in, it takes a lot of time and energy to build a team," she adds.

AVAILABILITY TRUMPS EVERYTHING

Availability is where the real world intrudes on the best-laid plans. "In most decisions about project teams, the No. 1 factor is who's available," says Hagerup.

Availability takes planning, says Tom Watson, a project manager at Bayer Corporate Business Services Inc. in West Haven, Conn. "You need to identify what resources you will need and when," he says. If you're expecting to need a certain person three months out, do something about it now. "Contact that person's boss and make it very clear that in three months you will need Joe's technical expertise," he says. "If he's not available, you may have to shift the project or deliverables based on when he is."

LEVERAGE MATTERS

Once you know what kind of team you'd like, how do you get it? One key to obtaining leverage is good relationships with other managers. "If I say I need Joe, that manager may have the same request five times a day," Anderson says. "But if I have a good history with him, he won't just blow me off."

Leverage can also come from an educated customer. When Rothman has trouble getting the people she wants for a project, she explains the implications. "I say, 'Here's what I can do, given the investment you're willing to put in. And if you give me the skills I want, here's the extra value I can add.'"

When it comes to picking teams, project managers shouldn't take no for an answer, says Jim Highsmith, a consultant at Cutter Consortium in Arlington, Mass. "Fight to get the right people on your team," he says. If you can't get them, tell the customer to alter or postpone the project until you can. It takes guts, he says, but the issue is simple: "Do they want projects done, or do they just expect miracles to happen?" © 4574

Bringing the MARKET INSIDE

IT-enabled internal markets can speed up and improve decision-making.

Q&A

Can the same laws of supply and demand that fuel world economies work within a company to help it stoff projects, share information and even schedule manufacturing? In April's Harvard Business Review, Thomas W. Malone, the Patrick J. McGovern Professor of Management at MIT's Sloan School of Management, tells how a team at MIT has been experimenting with the use of internal markets to demonstrate that what works in the global economy may work inside your business as well. In an interview with Computerworld's Kathleen Melymuk, he explains what internal markets are all about.

What is an internal market? An arrangement where people inside a single company buy and sell things to each other for money or some kind of internal points or "funny money."

What are the broader implications of internal markets for the way we work? Internal markets are one intriguing way that people throughout a company can exchange information much more rapidly and widely in a way that lets more people make decisions for themselves instead of just relying on people above them to tell them what to do.

What role does IT play in the internal-market scenario? IT greatly reduces the cost

and difficulties of having broad internal markets and therefore makes them more feasible in many more situations than they would have been in the past.

Talk about the way Hewlett-Packard uses internal markets to fund and staff projects. HP used a "VC cafe," inspired by how venture capitalist funding works. Any one in the division could propose a project, and that proposal would be reviewed by a board of senior managers. If those managers thought the project worth doing, they would fund it, and then a description of the project would be posted in an internal system where everyone could see it. People could indicate interest to the project manager. In this way, projects could be proposed and individuals could find projects they wanted to do even if their managers didn't know about their interests.

How else has HP used internal markets? In one case, they let marketing and sales people in one part of the company buy and sell "futures" contracts for predictions about what the sales of a particular product would be. For instance, people who believed sales would be 10,000 to 20,000 units would buy a contract for that prediction. If the prediction was correct, their contract would be worth a dollar; if incorrect, worth nothing. So over time, people bought and sold their futures contracts on sales predictions, and prices varied according to the collective opinions of everyone participating in the market. It turned out that this market made more

accurate predictions of actual sales than HP's own market research.

Why do you think that happened? Because the people participating in the market had a clear incentive to bet on the things they actually believed would happen rather than the things they hoped would happen or would make them look good. Another reason is they were able to combine the opinions of everyone participating more efficiently than a single survey or forecast would usually be able to do.

Can you briefly explain the internal market experiment MIT is doing with Intel? We've worked on a project with Intel to develop a scenario for how they could use an internal market to allocate their manufacturing capacity. Plant managers would sell futures contracts for a certain number of products to be delivered at a certain time in the future, and salespeople would buy those contracts in order to resell those products to their own external customers.

Through the process of supply and demand, prices for different products at different times would vary, and at the last moment before manufacturing needed to begin, the most highly valued products would actually be scheduled in the factories. In this way, the collective knowledge of all the plant managers and all the salesmen about manufacturing costs, customer demand and other factors could be efficiently taken into account in deciding exactly which products to make when.

How well do internal markets respond to change? They can respond very rapidly to changing conditions. Imagine that an earthquake disrupted an Intel fac-

ry in Singapore. If they were using an internal market, the response would be determined by rapid exchanges throughout the whole company. Other plant managers who had available capacity could quickly bid on performing the highest-value jobs that had been previously scheduled for the disrupted plant. Salespeople could negotiate to be sure the most important customer needs were met, and hundreds of people throughout the company could be simultaneously working on different parts of the problem without any bottleneck in the process.

Are there situations in which internal markets wouldn't work well? Certainly. In some cases, the best decision for the company is something that internal buyers and sellers would never agree on because it would never be in their own individual interests. In other cases, like when a company is shrinking, it might be possible to make decisions with internal markets, but it's likely to be faster and more effective to do so with centralized managers.

Why haven't internal markets been used much up to now? The most important reason they haven't been used is that the cost of communications and information processing needed for them to work has been prohibitive. Now those costs are falling dramatically with new information technologies.

How do internal markets facilitate individualism and innovation? Internal markets let individual salespeople bid as much as they think it's worth to provide expedited delivery or other kinds of specialized service for their own individual customers instead of having to do this by calling in favors or pulling strings throughout the company. The individual salespeople can see immediately what the actual cost would be and decide whether it's worth it in each case.

And internal markets tend to keep people honest, right? Internal markets provide the right incentives for people to buy and sell according to what they actually think will happen. It is, of course, possible that people might try to manipulate the market, but I think it will be easier to enforce trading rules because the senior managers will still have the power to punish those who abuse the internal market. © 45735

This is the latest in a series of monthly discussions with Harvard Business Review authors on topics of interest to IT managers.

Why a Market Inside?
A clear overview of supply and demand for each product or service.
Why rapidly changing conditions.
Service by letting the market determine the real cost and value of expedited delivery or other special arrangements.
People forced by powerful incentives to act according to what they really think will happen.

Bringing the MARKET INSIDE



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Some Advantages of An Internal Market

a clear overview of supply and demand for each product or service

..... very rapidly to changing conditions

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..... people honest by providing incentives to act according to what they really think will happen

Career Watch

Numbers Crunch: IT Security

\$13.5B

\$11.1B

7%

215k

33%

572

In information security, how many employees (full-time equivalents) focus on each of the following:

4.6

4.1

2.9

2.5

2.15

2.7

AVERAGE SECURITY STAFF SIZE: 581.8

SOURCE: MARCH 2003 CHIEF SECURITY OFFICER MAGAZINE SURVEY OF 406 IT SECURITY PROFESSIONALS

ADDITIONAL SOURCE: COMPUTERWORLD, INC. AND THE FEDERAL TRADE COMMISSION (FTC) INC.

Kreig Ecklund



Title: CIO

Employer: Mercy Ships (www.mercyships.org), a charity that operates a fleet of floating hospitals that serve people in developing nations around the world.

Background: Ecklund, 34, joined Mercy Ships in 1996 as an onboard network and systems administrator. Three years later, he was promoted to CIO.

Contact information: ekclund@mercyships.org.

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Toughest challenge: Recruiting skilled professionals for jobs with no official salary. Mercy Ships has a fund-raising program in which IT workers, including Ecklund, ask friends, former employers, church groups and others for financial contributions that can be earmarked to pay their salaries.

We caught up with Ecklund at the CIO Executive Summit in Houston on March 24.

Tell me about the people on your IT staff. We get people in what I call the "success to significance" category. They want to leave their mark on the world. These are people who are generally self-supporting, often early retirees. We also find there are a lot of younger people who want to have an impact on the world. Some of these people come for a year. We have one Canadian whose employer allows him to work remotely as a systems administrator. He works for his employer 30 hours a week, and he works for us 30 hours a week.

What IT positions do you have open? We're looking for Java developers, systems analysts and database administrators.

Are there career benefits you can offer in lieu of a salary? For young people, it's an opportunity to build a résumé. I think there's also a very good opportunity for quick advancement. If you're good, you'll move up faster in our organization than in others. I'm very young - 34 - and I'm a CIO.

- Julia King

EXEC TRACK

Heitmann Heads IT At KVH Industries



Kelly Heitmann has joined KVH Industries Inc. in Middletown, R.I., as CIO. KVH designs and manufactures products for mobile communication, navigation and industrial applications. Heitmann most recently served as CIO at Edwards Systems Technology Inc. in Saratoga, Calif.

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BART PERKINS

It's Time for a Risk/Reward System

IN RECENT YEARS, many companies have taken advantage of the difficult economy, demanding drastic price reductions and forcing suppliers to accept terms that result in little or no profit. While this approach may work temporarily, "vendor bending" is a shortsighted solution [see "A Squeezed Supplier Never Forgets," QuickLink 34182]. It's time for contracts that offer advantages to both parties.

Risk/reward contracts are an attractive alternative to traditional contracts. In these agreements, buyers risk paying more fees for the work but are rewarded by having their objectives met or exceeded. Suppliers risk reduced profits if they fail to deliver but are rewarded for superior performance.

Risk/reward contracts are especially effective for high-risk projects with significant business benefits. They distribute risk, provide benefits to both sides and align a company's interests with those of its supplier.

As an example, consider a high-risk project with a fair market value of \$1 million and a monthly benefit of \$80,000 when completed. In a risk/reward contract, the buyer pays \$750,000 and agrees to pay the additional \$250,000 "at risk" fee if the objectives and deadlines specified in the contract are met. (In general, these at-risk fees are set at 10% to 40% of the total contract.) If other "stretch" objectives are met, the supplier will be paid additional incentive fees. Incentive fees can be a lump sum or incremental payments based on project metrics or milestones. For example, there might be an early-completion bonus of \$40,000 per month.

Risk/reward contracts are more dif-

ficult to create and manage than standard contracts and are generally unwarranted for commodity purchases. But for projects with high stakes, they offer significant benefits to both parties.

Buyer Benefits

Reduced risk. The fee structure shares the buyer's risk with the supplier. Most suppliers undertake risk/reward projects only if they are confident they can succeed. If you can't find any suppliers willing to undertake your project on a risk/reward basis, you may need to restructure the project to further reduce risk.

Aligned objectives. Some types of contracts give suppliers little or no reason to deliver on schedule. For example, time and materials contracts can actually motivate suppliers to extend projects to maximize their fees. In contrast, risk/reward contracts maximize the fees of suppliers that meet or exceed your objectives. In the construction industry, it's common for crews to work nights and weekends when the contractor faces deadlines that threaten big penalties or promise big bonuses. Similarly, risk/reward contracts can be considered an insurance policy against supplier underperformance.

Payments tied to results. Risk/reward

contracts ensure that suppliers receive the at-risk fees only if the contract terms are delivered as specified. Additional incentive payments are received only if additional objectives are achieved. If buyers create good business cases before negotiating their risk/reward contracts, the benefits of meeting the stretch objectives should outweigh the burden of paying the incentive fees. If the contracts are done properly, both sides should be delighted when incentive fees are paid.

Supplier Benefits

Risk/reward contracts enable suppliers to enter negotiations and discussions around the value and benefits they offer instead of focusing exclusively on cost.

Communication of confidence. Signing a risk/reward contract demonstrates to the buyer (and the marketplace) that the supplier clearly understands the project and believes so strongly in its capabilities that it will stake its profits on its success.

Project team motivation. In many cases, a supplier needs its team's buy-in to achieve a contract's objectives, especially on high-risk projects. Offering to share a percentage of the incentive fees with the project team can motivate them to outperform the contract.

Higher potential profits. Incentive fees offer a supplier the potential to earn more profits than it would have earned from a standard contract, based on its own performance. When you have a high-risk project with major business benefits, a risk/reward contract allows you to leverage the capabilities of your suppliers to maximum advantage. Such contracts motivate your IT supplier to achieve your business objectives, and more, in a timely manner. **■ 45726**

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Career Watch

Numbers Crunch: IT Security

| | |
|---------|--|
| \$13.5B | Worldwide financial effect of major virus attacks in 2003 |
| \$11.1B | Worldwide financial effect of major virus attacks in 2002 |
| 7% | Projected annual rate of growth of U.S. government IT security spending over the next four years |
| 215k | Number of identity theft complaints filed in the U.S. in 2003 |
| 33% | Percentage by which U.S. identity theft reports increased over 2002 |
| 572 | Number of IT security specialist jobs listed on Dice.com during the week of March 22, 2004 |

SOURCE: SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE

In information security, how many employees (full-time equivalents) focus on each of the following:

| | |
|------|-----------------------------------|
| 4.6 | Security administration |
| 4.1 | Technical development and support |
| 2.9 | Architecture and engineering |
| 2.5 | Disaster recovery and backup |
| 2.15 | Compliance and reporting |
| 2.7 | Other |

AVERAGE SECURITY STAFF SIZE: 20.9
SOURCE: SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE; SECURITY AND INFRASTRUCTURE DIVISION, U.S. DEPARTMENT OF JUSTICE

More Internet Connections Mean More IT Security Jobs

BY 2010, more than 14 billion devices with computer chips will be connected to the Internet. That includes cars, cell phones, household appliances, electronic entertainment gear and even shoes and clothing. Even more important is that many of these devices will be capable of rescuing mini-applications downloaded from other Internet-connected devices. For instance, chips in tires might download and execute programs to gauge air pressure and measure wear on the tread. Executing such programs will, of course, require user identification and authentication, and therein

lies the good news for IT security professionals, according to Forrester Research Inc. CEO George Colony.

"It's a good time to make a living as a chief security officer," Colony told CIOs attending the CIO Executive Summit in Houston last month. "Now, of course, everyone knows not to open executable programs because of viruses, but we're headed toward the executable Internet, and that means greater security."

For 2004, Forrester has upgraded its previous forecast of a 1.7% increase in IT spending to a 5% increase, Colony says. Companies will spend the most on upgrading IT security, including hiring security professionals and improving disaster recovery capabilities, he says.

—Julie King

Candidates With Security Clearances Command Top Dollar

JOB SEEKERS with active government security clearances are very much in demand and can command up to \$10,000 more in salary than their noncleared counterparts, according to May Jo Westcott, a human resources generalist at Government Micro Resources Inc., a government IT contractor in Menasha, Wis. In the past year, the company has experienced a tenfold increase in the number of open positions for workers with security clearances.

Experts say the surge in demand is due to new initiatives in homeland security

and wars on multiple fronts, which have produced thousands of new government contracts and jobs to be filled. Some employers are even willing to overlook a lack of specific skills in those candidates who have high-level government clearances, according to Rachel Starnes, founder of ClearanceJobs.com, an Internet job board dedicated to candidates with active government security clearances.

"With the process to clear a previously uncleared worker still taking up to 18 months, employers are finding it more cost-effective to hire someone with fewer skills and train them than [it is to get clearance for] an uncleared job seeker," Starnes notes.

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Risk/reward contracts are more dif-



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ficult to create and manage than standard contracts and are generally unwarranted for commodity purchases. But for projects with high stakes, they offer significant benefits to both parties.

Buyer Benefits

Reduced risk. The fee structure shares the buyer's risk with the supplier. Most suppliers undertake risk/reward projects only if they are confident they can succeed. If you can't find any suppliers willing to undertake your project on a risk

reward basis, you may need to restructure the project to further reduce risk.

Aligned objectives. Some types of contracts give suppliers little or no reason to deliver on schedule. For example, time and materials contracts can actually motivate suppliers to extend projects to maximize their fees. In contrast, risk/reward contracts maximize the fees of suppliers that meet or exceed your objectives. In the construction industry, it's common for crews to work nights and weekends when the contractor faces deadlines that threaten big penalties or promise big bonuses. Similarly, risk/reward contracts can be considered an insurance policy against supplier underperformance.

Payments tied to results. Risk/reward

contracts ensure that suppliers receive the at-risk fees only if the contract terms are delivered as specified. Additional incentive payments are received only if additional objectives are achieved. If buyers create good business cases before negotiating their risk/reward contracts, the benefits of meeting the stretch objectives should outweigh the burden of paying the incentive fees. If the contracts are done properly, both sides should be delighted when incentive fees are paid.

Supplier Benefits

Pricing based on value. Risk/reward contracts enable suppliers to center negotiations and discussions around the value and benefits they offer instead of focusing exclusively on cost.

Communication of confidence. Signing a risk/reward contract demonstrates to the buyer (and the marketplace) that the supplier clearly understands the project and believes so strongly in its capabilities that it will stake its profits on its success.

Project team motivation. In many cases, a supplier needs its team's buy-in to achieve a contract's objectives, especially on high-risk projects. Offering to share a percentage of the incentive fees with the project team can motivate them to outperform the contract.

Higher potential profits. Incentive fees offer a supplier the potential to earn more profits than it would have earned from a standard contract. Based on its own performance. When you have a high-risk project with major business benefits, a risk/reward contract allows you to leverage the capabilities of your suppliers to maximum advantage. Such contracts motivate your IT supplier to achieve your business objectives, and more, in a timely manner. **45728**

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FRANK HAYES • FRANKLY SPEAKING

360's Legacy

FORTY YEARS. Who'd have thought it would last so long? On April 7, 1964, IBM announced its System/360. The 360 wasn't the first mainframe, or the fastest, or even the most technically advanced. It was breathlessly billed by the press as IBM's bet-the-business gamble, a \$5 billion investment that would make or break the company.

Actually, that last part was hype — IBM already owned 70% of the data processing market on the day the 360 was announced.

What wasn't hype was that the 360 would change IT forever. And

you're still living with those changes today. For good and for ill. Whether you're a mainframer or not.

The 360 idea seems obvious now: a line of computers that could all run the same software. But until 1964, that didn't exist. Every new computer came with a new architecture. To upgrade hardware, you had to rewrite your applications. And because the life span of a mainframe product line in those days was three to six years, that meant a lot of rewriting.

True, every time an application was rewritten, it got better. Bugs were fixed, designs were streamlined, new ideas were implemented. But there was no choice — applications had to be rewritten every few years. That was expensive. And with a limited number of programmers in the world, that's about all they could do.

Enter the System/360. Suddenly, applications didn't have to be rewritten. They could be moved pretty much unchanged to new hardware. That saved programmer time and effort, which translated into saved money.

That was the obvious part. What happened next was more subtle.

Now that programmers had more time, they could do new things. And they could take on longer, more complex projects. Before the 360, a multiyear application development project would have been crazy — by the time it was done, the hardware it was written for would be obsolete.

But hardware compatibility meant platform stability. That led to application longevity, which made complexity possible. A whole new world opened up for IT, a world of huge, business-changing megaprojects. For IT, and for the businesses we serve, that's been a very good thing.

The downside? In the pre-360 days, design decisions had a natural life span of three to six years before they were revisited during the rewrite. But with platform stability, those design decisions could last for decades.

That's how we got Y2k, isn't it? And why so many of our one-time megaprojects are now unwieldy, overly complex, hard to use and harder to maintain. They're full of design decisions that have outlived their usefulness — but as long as the applications work, more or less, we can't afford to replace them. They'll live forever.

And in the 40 years since the 360's birth, 360-style stability has turned out to be such a powerful idea that after it mowed down IBM's mainframe competitors, it became the dominant paradigm for every IT architecture that followed. We've tried to re-create the 360 on everything from minicomputers to PCs and Macintoshes, from Unix to Windows to Linux. Today, we can't imagine IT without it.

That's the 360's legacy: 40 years' worth of stability, longevity and complexity that now permeate every platform we use in IT.

That goes along with 40 years' worth of obsolete design decisions and applications that can't be changed fast enough to truly serve the constantly changing needs of our businesses — all because we're so stuck on that stability, longevity and complexity.

The 360's great strength has become our biggest weakness. And there's no sign we'll overcome it anytime soon.

So, mainframer or not, help yourself to a slice of the 360's birthday cake. The legacy of the System/360 isn't all good. But unless we find a better way to do IT, it'll be with us all for a long time to come. **© 40073**



Cleaver Vascular Trick No. 17

It's the 1980s, and this startup company has just made a big sale of its pricey artificial-intelligence-based application to a bank. As tech pilot fish is learning to swim the \$200,000 software, his boss tells him, "Try to distract them when you load the software off the floppy disks." Turns out that's easy. "My sales partner always wore a short skirt, and the bank people were interested with were all middle-aged bank executives," fish says. "They kept their eyes on her."

From R On

fish owner

gets a star

selected a seat

on his laptop,

and it's designed by

software engineers.

That be-

comes his company - and

doesn't want to take the

time to get the client

problem worked on his

computer - he forwards

the message to his

colleague and colleague to

take over the client

problem. "This company

for computer work is

on its."

Wasting Time

the computer is

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the computer is

SHARK
TANK

to display an

image on

the wall for

a management

team. "It

being my laptop and

projector unit," CEO says.

That has nothing. "I don't

know with all that hard-

ware, the more that

of his money went in IT,

the more he was

that was his life," CEO

thinks. "I don't know

how much money he

has. I don't know

how much money he

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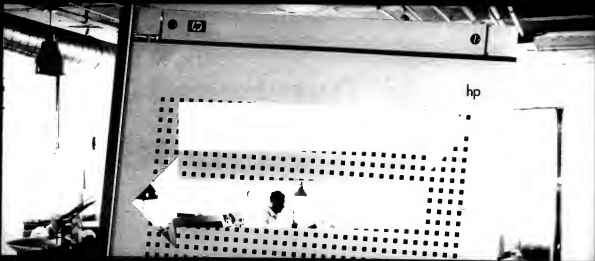
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